

The
INTERNATIONAL



International Education Series

EDITED BY

WILLIAM T. HARRIS, A. M., LL. D.

VOLUME XL



6194

ELEMENTARY PEDAGOGY.

CONTRIBUTIONS BY JOSEPH BALDWIN, A. M., LL. D.

VOLUME I.
ART OF
SCHOOL MAN-
AGEMENT.
Kirksville.
Missouri State
Normal School.

- I. Educational Instrumentalities and School Hygiene.
- II. School Organization and Classification.
- III. School Government and Educative Punishments.
- IV. Courses of Study and Programmes.
- V. Class Management and Methods of Teaching.
- VI. Examination, Marking, Records, Promotion, and Graduation.
- VII. Professional Education, School Supervision, and Educational Progress.

VOLUME II.
ELEMENTARY
PSYCHOLOGY.
Vol. VI, Int.
Ed. Ser.
Huntsville.
Texas State
Normal School.

- I. Instinct, Sensorium, Sensation, and Attention.
- II. Sense Perception, Self Perception, and Necessary Perception.
- III. Memory, Fancy, and Imagination.
- IV. Conception, Judgment, and Reason.
- V. Egoistic Emotions, Altruistic Emotions, and Cosmic Emotions.
- VI. Will—Attention, Choice, and Action.
- VII. Physiological Psychology and Education.

VOLUME III.
PSYCHOLOGY
APPLIED TO
THE ART OF
TEACHING.
Vol. XIX, Int.
Ed. Ser.
Austin.
University of
Texas.

- I. Education of the Perceptive Activities.
- II. Education of the Representative Activities.
- III. Education of the Reflective Activities.
- IV. Education of the Emotional Activities.
- V. Education of the Will Activities.
- VI. The Art of Teaching and Teaching Methods.
- VII. Application of Psychology to teaching Conduct Studies, Language-Literature Studies, Science Studies, Mathematics Studies, and Art Studies.

VOLUME IV.
SCHOOL MAN-
AGEMENT AND
SCHOOL
METHODS.
Vol. XL,
Int. Ed. Ser.
Austin.
University of
Texas.

- I. Pupil Betterment through Better Educational Conditions.
- II. Pupil Betterment through Better Educational Facilities.
- III. Pupil Improvement through Educative School Government.
- IV. Pupil Improvement through Educative Correlation of Schools and School Work.
- V. Pupil Betterment through Educative Class Management and Class Methods.
- VI. Pupil Improvement through Efficient Methods of teaching the Conduct Studies, the Language-Literature Studies, the Science Studies, the Mathematics Studies, and the Art Studies.
- VII. Pupil Betterment through Educative School Unification and Supervision.

INTERNATIONAL EDUCATION SERIES.

12mo, cloth, uniform binding.

THE INTERNATIONAL EDUCATION SERIES was projected for the purpose of bringing together in orderly arrangement the best writings, new and old, upon educational subjects, and presenting a complete course of reading and training for teachers generally. It is edited by WILLIAM T. HARRIS, LL.D., United States Commissioner of Education, who has contributed for the different volumes in the way of introduction, analysis, and commentary.

1. **The Philosophy of Education.** By JOHANN K. F. ROSENKRANZ, Doctor of Theology and Professor of Philosophy, University of Königsberg. Translated by ANNA C. BRACKETT. Second edition, revised, with Commentary and complete Analysis. \$1.50.
2. **A History of Education.** By F. V. N. PAINTER, A. M., Professor of Modern Languages and Literature, Roanoke College, Va. \$1.50.
3. **The Rise and Early Constitution of Universities. With a Survey of Mediæval Education.** By S. S. LAURIE, LL.D., Professor of the Institutes and History of Education, University of Edinburgh. \$1.50.
4. **The Ventilation and Warming of School Buildings.** By GILBERT B. MORRISON, Teacher of Physics and Chemistry, Kansas City High School. \$1.00.
5. **The Education of Man.** By FRIEDRICH FROEBEL. Translated and annotated by W. N. HAILMANN, A. M., Superintendent of Public Schools, La Porte, Ind. \$1.50.
6. **Elementary Psychology and Education.** By JOSEPH BALDWIN, A. M., LL.D., author of "The Art of School Management." \$1.50.
7. **The Senses and the Will. (Part I of "THE MIND OF THE CHILD.")** By W. PREYER, Professor of Physiology in Jena. Translated by H. W. BROWN, Teacher in the State Normal School at Worcester, Mass. \$1.50.
8. **Memory: What it is and How to Improve it.** By DAVID KAY, F. R. G. S., author of "Education and Educators," etc. \$1.50.
9. **The Development of the Intellect. (Part II of "THE MIND OF THE CHILD.")** By W. PREYER, Professor of Physiology in Jena. Translated by H. W. BROWN. \$1.50.
10. **How to Study Geography.** A Practical Exposition of Methods and Devices in Teaching Geography which apply the Principles and Plans of Ritter and Guyot. By FRANCIS W. PARKER, Principal of the Cook County (Illinois) Normal School. \$1.50.
11. **Education in the United States: Its History from the Earliest Settlements.** By RICHARD G. BOONE, A. M., Professor of Pedagogy, Indiana University. \$1.50.
12. **European Schools; or, What I Saw in the Schools of GERMANY, FRANCE, AUSTRIA, AND SWITZERLAND.** By L. R. KLEMM, Ph. D., Principal of the Cincinnati Technical School. Fully illustrated. \$2.00.
13. **Practical Hints for the Teachers of Public Schools.** By GEORGE HOWLAND, Superintendent of the Chicago Public Schools. \$1.00.
14. **Pestalozzi: His Life and Work.** By ROGER DE GUIMPS. Authorized Translation from the second French edition, by J. RUSSELL, B. A. With an Introduction by Rev. R. H. QUICK, M. A. \$1.50.
15. **School Supervision.** By J. L. PICKARD, LL.D. \$1.00.
16. **Higher Education of Women in Europe.** By HELENE LANGE, Berlin. Translated and accompanied by comparative statistics by L. R. KLEMM. \$1.00.
17. **Essays on Educational Reformers.** By ROBERT HERBERT QUICK, M. A., Trinity College, Cambridge. Only authorized edition of the work as rewritten in 1890. \$1.50.
18. **A Text-Book in Psychology.** By JOHANN FRIEDRICH HERBART. Translated by MARGARET K. SMITH. \$1.00.
19. **Psychology Applied to the Art of Teaching.** By JOSEPH BALDWIN, A. M., LL.D. \$1.50.

THE INTERNATIONAL EDUCATION SERIES.—(Continued.)

20. **Rousseau's Emile; or, Treatise on Education.** Translated and annotated by W. H. PAYNE, Ph. D., LL. D. \$1.50.
21. **The Moral Instruction of Children.** By FELIX ADLER. \$1.50.
22. **English Education in the Elementary and Secondary Schools.** By ISAAC SHARPLESS, LL. D., President of Haverford College. \$1.00.
23. **Education from a National Standpoint.** By ALFRED FOUILLÉE. \$1.50.
24. **Mental Development of the Child.** By W. PREYER, Professor of Physiology in Jena. Translated by H. W. BROWN. \$1.00.
25. **How to Study and Teach History.** By B. A. HINSDALE, Ph. D., LL. D., University of Michigan. \$1.50.
26. **Symbolic Education. A COMMENTARY ON FROEBEL'S "MOTHER-PLAY."** By SUSAN E. BLOW. \$1.50.
27. **Systematic Science Teaching.** By EDWARD GARDNIER HOWE. \$1.50.
28. **The Education of the Greek People.** By THOMAS DAVIDSON. \$1.50.
29. **The Evolution of the Massachusetts Public-School System.** By G. H. MARTIN, A. M. \$1.50.
30. **Pedagogics of the Kindergarten.** By FRIEDRICH FROEBEL. \$1.50.
31. **The Mottoes and Commentaries of Friedrich Froebel's Mother-Play.** By SUSAN E. BLOW and HENRIETTA R. ELIOT. \$1.50.
32. **The Songs and Music of Froebel's Mother-Play.** By SUSAN E. BLOW. \$1.50.
33. **The Psychology of Number.** By JAMES A. MCLELLAN, A. M., and JOHN DEWEY, Ph. D. \$1.50.
34. **Teaching the Language-Arts.** By B. A. HINSDALE, LL. D. \$1.00.
35. **The Intellectual and Moral Development of the Child. PART I.** By GABRIEL COMPAYRÉ. Translated by MARY E. WILSON. \$1.50.
36. **Herbart's A B C of Sense-Perception, and Introductory Works.** By WILLIAM J. ECKOFF, Ph. D., Ph. D. \$1.50.
37. **Psychologic Foundations of Education.** By WILLIAM T. HARRIS, A. M., LL. D. \$1.50.
38. **The School System of Ontario.** By the Hon. GEORGE W. ROSS, LL. D., Minister of Education for the Province of Ontario. \$1.00.
39. **Principles and Practice of Teaching.** By JAMES JOHONNOT. \$1.50.
40. **School Management and Methods.** By JOSEPH BALDWIN. \$1.50.
41. **Froebel's Educational Laws for all Teachers.** By JAMES L. HUGHES, Inspector of Schools, Toronto. \$1.50.
42. **Bibliography of Education.** By WILL S. MONROE, A. B. \$2.00.
43. **The Study of the Child.** By A. R. TAYLOR, Ph. D. \$1.50.
44. **Education by Development.** By FRIEDRICH FROEBEL. Translated by JOSEPHINE JARVIS. \$1.50.
45. **Letters to a Mother.** By SUSAN E. BLOW. \$1.50.
46. **Montaigne's The Education of Children.** Translated by L. E. RECTOR, Ph. D. \$1.00.
47. **The Secondary School System of Germany.** By FREDERICK E. BOLTON. \$1.50.
48. **Advanced Elementary Science.** By EDWARD G. HOWE. \$1.50.
49. **Dickens as an Educator.** By JAMES L. HUGHES. \$1.50.
50. **Principles of Education Practically Applied.** By JAMES M. GREENWOOD. Revised. \$1.00.

THE INTERNATIONAL EDUCATION SERIES.—(Continued.)

51. **Student Life and Customs.** By HENRY D. SHELDON, Ph. D. \$1.20 net.
52. **An Ideal School.** By PRESTON W. SEARCH. \$1.20 net.
53. **Later Infancy of the Child.** By GABRIEL COMPATRÉ. Translated by MARY E. WILSON. Part II of Vol. 35. \$1.20 net.
54. **The Educational Foundations of Trade and Industry.** By FABIAN WARE. \$1.20 net.
55. **Genetic Psychology for Teachers.** By CHARLES H. JUDD, Ph. D. \$1.20 net.

OTHER VOLUMES IN PREPARATION.

D. APPLETON AND COMPANY, NEW YORK.

INTERNATIONAL EDUCATION SERIES

~~Ed. & S.~~

SCHOOL MANAGEMENT
AND SCHOOL METHODS

~~8186~~

~~818~~

BY

JOSEPH BALDWIN, M. A., LL. D.

PROFESSOR OF PEDAGOGY IN THE UNIVERSITY OF TEXAS
AUTHOR OF ART OF SCHOOL MANAGEMENT, ELEMENTARY PSYCHOLOGY,
AND PSYCHOLOGY APPLIED TO THE ART OF TEACHING

NEW YORK
D. APPLETON AND COMPANY
1903

EDITOR'S PREFACE.

ACCORDING to the scheme upon which this series of books has been edited, the present work falls under the fourth division—under the Art of Education. The first division includes history of education; the second division, educational criticism, including the writings of the educational reformers; the third division includes systematic treatises on the theory of education; the fourth, writings upon the art of education in two divisions—first, works on instruction and discipline and the practical details of the schoolroom; second, works on the organization and supervision of schools.

The present book discusses: First, the hygienic conditions of the schoolroom and grounds, and the formation of healthful habits on the part of the pupils. In the past twenty-five years very much has been done in the way of studying these hygienic conditions. At first there were many investigations, made especially by German observers, upon the effect of the schoolroom and the preparation of lessons upon the eyesight. It was found that a large percentage of the children in the higher grades of school work had become near-sighted. The most

prominent cause of this was found to be the insufficiently lighted schoolroom or the injudicious study of the pupil at home in the twilight of evening or morning, and also with insufficient artificial light. The pupil makes up for the lack of light by holding his book nearer to his eyes than their actual focus requires. This after a time leads to a permanent readjustment of that focus, and the disease called myopia has then become permanent. The light should come in sufficient quantity upon the left side of the pupil, for in writing he will form the letters in the shadow of his right hand if the light comes from the right side. It is very important that the light shall not come from windows in front of the pupil, because the bright light occasions a contraction of the pupils of the eyes, while the attempt to discriminate objects, such as the teacher's face, for instance, in the direction of that light, is rendered difficult and painful, and injury through the eyes results to the entire nervous system. Again, the subject of the air of the schoolroom has been carefully investigated and the relative amount of carbonic acid in the air, together with other injurious elements, has been tabulated. It has often happened that nearly as much injury has come to the pupils through injudicious ventilation as through the want of ventilation. The windows, open from the bottom, allow currents of cold air to flow in upon the pupils, occasioning rheumatism and bad colds, even planting the seeds of consumption and heart disease.

It is not easy to correct these school evils. As already intimated, there has been nearly as much evil

created by the remedies as avoided by them. "The fresh-air fiend" is nearly as great an evil to society as the fiend of neglect; but this is no apology for the existence of the latter. We must have fresh air, and under proper conditions. In the name of hygiene we have had a system of calisthenic exercises, often introduced in such a way as to abolish the good old-time school recess, wherein the child rests not only his intellect, but his will power, playing or refraining from play according to his caprice. Play differs from work in the fact that it depends entirely upon the spontaneity of the pupil, while work requires the tension of the will, and that, too, in the line of activity prescribed by outside authority. Calisthenics therefore belongs to the working activity, inasmuch as it is a vigorous exercise of the will but entirely in conformity with the will of another person, the director of the exercises. Looked at from the standpoint of wise physicians who have undertaken the direction of college athletics, one shudders at the hideous violations of the laws of health which were imported into our schools in the past generation under the plea of hygiene.

Under the head of better educational facilities Prof. Baldwin calls attention to the school apparatus and improved schoolhouses. It is fortunate in our time that so much inventive talent is expended upon devices for facilitating school work. No subject is more practical than school discipline. The professionally educated teacher is a comparative novice in his work until he masters the art of school government. He should govern so as to continually develop a rational self-control on the part of the pupil, and his training

should result in the formation of habits of self-help by means of the book, and in skill in the art of original investigation and verification; but the novice in teaching finds himself directly opposed by the pupil's self-will at the beginning. The government of the school requires obedience on the part of the pupil, but all pupils who inherit a disposition to strong wills are reluctant to submit to the authority of the teacher. How can this be managed without leaning too far in the direction of anarchy and chaos in the school which would result in tyranny on the part of the older pupils over the younger pupils or, on the other hand, leaning toward despotism and mere blind obedience on the part of the pupil? The art of school management in this important particular has made more progress in the United States during the past thirty years than any other practical phase of school teaching. Our methods of instruction, which have striven to substitute self-activity of the pupil in the way of investigation for mere memorizing or parrotting the words of the book or teacher, have certainly made less progress than the art of school discipline. In the past, not many years ago, corporal punishment was very frequent. The schools in the majority of our cities have so far overcome the habit of resorting to corporal punishment that the schoolroom now assumes the atmosphere of a pleasant and urbane assemblage of a well-mannered family in the home. The air of freedom and polite behaviour takes the place of the suppressed and sullen mien of old times. The significance of this upon the formation of the future citizen in a democracy is obvious.

Another rubric almost as important as the last is that of class methods and management. The ignorance of intelligent people, even those engaged in the work of education, in this matter is astonishing. The advantage of the class recitation over the teaching of the private tutor is not well understood. The class is the most potent of all the instruments in the teacher's hand. He so manages the recitation or class exercises that each pupil learns to see the lesson through the minds of all his fellows, and he learns likewise to criticise the imperfect statements made by them through the more adequate comprehension of the teacher. It must be remembered, too, that the defects of view which one pupil shows in the recitation are not the same defects that others have. Each pupil therefore, even the humblest, is in some respects able to criticise the work of his fellows, although he in turn may be subject to a more severe criticism in regard to other aspects of the work of the day. The good teacher so manages the recitation that at its close every member of the class commences the preparation of another lesson with some new insight into method of study. He is on the alert for phases of the subject which he had neglected the day before. To make the pupil alert in all reasonable directions is the main object. The pupil will become able to conduct his own investigations by the aid of the printed page and by the original study of the objects of Nature or art to which his topic relates.

The selection of the course of study is a matter of school management of equal importance with that of the method of handling the class lesson. There are

certain "windows of the soul" which are closed in the mind of the illiterate person, but which are opened by the education of the school. These windows look out upon the five provinces: (a) Inorganic Nature (arithmetic); (b) organic Nature (geography); (c) the intellect and the logical process of the mind as revealed in grammar and similar studies; (d) the will power of man as manifested in the forming of institutions and in the struggle of nations one against another and with refractory individuals, the study of the greater self of man as found in social wholes (history); and (e) the window opened by literature which looks upon the manifestation of human nature in its most intimate aspects; for literature reveals the human heart, first, as the seat of feeling; then the rise out of this dim unconscious realm of feeling into that of clear conviction and insight into principles; then, last, the realizing of these ideas in action. Feelings, convictions, deeds—the three products of human nature—are shown to the pupil in the prose and poetry of literature. No knowledge is so practical as that of human nature, and no study plays so large a part in the forming of the practical contents of the citizen's mind as his study of literature.

Glimpses are given throughout the following book of the best practical methods of organizing and supervising schools, and in this respect it is believed by the publishers that it will prove of great service to school superintendents and school boards.

W. T. HARRIS.

WASHINGTON, D. C., January 13, 1896.

AUTHOR'S PREFACE.

SCHOOL management and school methods are the twin arts of pupil betterment. Pupil improvement is the central idea. What is the best thing for the pupil? This question determines every school measure. In these chapters we study pupil betterment: 1. Through improved educational conditions. 2. Through better educational facilities. 3. Through rational school government. 4. Through educative class work. 5. Through better organization and correlation of schools and school work. 6. Through efficient methods of teaching. 7. Through efficient supervision.

Perpetual progress is the keynote. The sacrifice of a lower to a higher good is an incident in all true progress. The good often stands in the way of the best, and unthinking conservatism is the enemy of progress. The true teacher is ever advancing from the good to the better. As progress comes from ideals in advance of reals, teachers are here incited to form higher and higher ideals, and earnestly strive to realize them. We think of the teacher as an educational artist, working out anew the problems of school betterment, and skilfully leading pupils to make the

most of themselves. The purpose is to assist earnest independent workers by the most helpful facts and the most fruitful suggestions, and by inspiring each teacher to work out grandly his own salvation.

The isolated school and the isolated teacher belong to the past. Incomparably the greatest educational reform of our times is the organic grouping of schools and the organization of all teachers into faculties. Each group of schools is *sui generis*, and each faculty is a teaching unit. A faculty devotes itself to its specific problems; thus a primary faculty devotes itself to child study, primary management, and primary methods. The author seeks to interest all teachers in this vital reform as the best means for promoting all reforms.

Educative school government is fundamental. School management is eminently the art of rational school government. The modern teacher is the friend of the pupil and governs up to self-government. Teachers are asked to study anew the philosophy of controlling up to self-control, and thus give to their schools the "atmosphere of an urbane assemblage of a well-mannered family." I believe the time has come when we may safely discard extraneous incentives, such as rewards, per-cent marking, formal examinations, and corporal punishment. It seems to me infinitely better to secure good conduct and good study through enabling motives. The plan for rational school government is revolutionary, but it accords with the best in modern school life, and I deem it sound in theory as well as eminently practical. It is with peculiar pleasure that I submit the chapters on school government.

Conduct culture is the greatest thing in education. In this book the conduct studies take the highest rank, and we study to make conduct teaching as systematic and thorough as the work in mathematics. All teachers are first of all character growers, and conduct culture stands first. This is the educational superlative. It is my deepest desire to intensely interest teachers in the art of promoting good conduct. Systematic conduct teaching will do most for pupil betterment.

The better organization and correlation of schools and school work interest all men. Germany and France and England have made valuable contributions, but the best work has been done by our Committee of Ten, our Committee of Fifteen, and our Committee of Twelve. It gives me satisfaction to submit this contribution, which has cost me years of hard work. I feel safe in commending the scheme for rural school betterment. A plan for intermediate specialization is submitted tentatively. The sporadic experiments in grammar-school departmental teaching, predoomed to failure, and the decided opposition of leading educators, have, as I think, set back for a decade the dial of progress. In another decade or two, I do not doubt, the necessities of progress will naturally lead to the evolution of our wasteful grammar schools into efficient specialized intermediate schools, and the objections now so ably urged will disappear in view of the immense gains. But the transformation must be radical, and intermediate specialization must be unique. I appeal to the brotherhood of teachers: let true intermediate specialization be submitted to the test of scientific experiment. That it will double the value

of the grammar school and incalculably benefit the teaching profession, seems to me certain.

The teaching art is a boundless realm of high endeavour. Efficient methods of teaching the conduct studies, the language-literature studies, the science studies, the mathematics studies, and the art studies need to be treated by masters and in many volumes. All that can be attempted in a book like this is to outline the work and refer teachers to some of the best manuals of methods. The aim is to help the teachers to gain a comprehensive view of the entire school work, so that they may intelligently do their special work.

Teachers struggling up alone have our profoundest sympathies, and these pages have been written in view of aiding this large and deserving class. But in the near future these isolated teachers will get together and will work far more profitably in circles and in faculties. I have studied to make this pre-eminently a suitable text-book for classes of teachers. I have found the following plan of study most satisfactory:

1. *Study an assigned chapter.* Each chapter is complete in itself, and is devoted to a vital educational topic. The chapters may be studied consecutively, or may be taken up in any determined order.

2. *Read some similar work.* Let each member of the class read a different book and report what is said on the topic under discussion. Such helpful works as White's School Management, Tompkins's Philosophy of School Management, Parker's Concentration, and Landon's Teaching and Class Management are suggested. The latest Report of the Commissioner of

Education and the latest Journal of the National Educational Association are considered indispensable.

3. *Read an educational journal.* By arranging to have each teacher read a different journal, the lesson may be enriched by the best current educational thought. Our school journals are becoming our best helps in practical school work and in promoting reforms.

4. *Give your views.* What each teacher thinks is the important matter. Let each member of the circle study to make some original contribution. I venture to hope that these chapters, studied as suggested, will prove intensely interesting and exceedingly valuable. To favour busy teachers, I have given the Study Hints, the full Alphabetical Index, and the Topical Syllabus.

It gives me special pleasure to acknowledge my indebtedness, first of all, to the editor of the International Educational Series for reading the proof and for numerous helpful suggestions. I am especially indebted to my student readers who have generously aided me in these investigations and in widely testing these plans. I wish to thank the faculty of the University of Texas and the faculty of the Oswego New York State Normal School for valuable assistance. While claiming for this work some originality in plan and treatment, I desire to express my indebtedness to many educators, educational works, and educational journals that it has been impossible to credit. Once more I warmly thank my fellow-teachers and the press for the generous reception accorded to my humble contributions to our professional literature.

It is easy to collect and dilute and so compile a

cheap book about school management; but to create a helpful text-book for progressive teachers is a prodigious undertaking. In order to do so, one needs to live in the great school world and work near its throbbing heart. All educational problems must be studied anew in the light of educational science and human experience. Only what is safe and best must be admitted. The antiquated, the hurtful, and even the doubtful must be rejected. A few vital topics must be selected and so treated as to inspire and guide. Finally, chapters must be condensed into pages and essays into paragraphs. Just here a personal allusion seems to be in place. I have endeavoured to put into these pages the results of four decades of study and teaching. During these years it has been my good fortune to work in rural schools, graded schools, normal schools, and colleges, and to assist in training an army of more than ten thousand teachers. What I have found to be most helpful I submit to the great brotherhood of teachers.

AUSTIN, UNIVERSITY OF TEXAS,
February 1, 1897.

JOSEPH BALDWIN.

88
38

CONTENTS.

	PAGE
EDITOR'S PREFACE	vii
AUTHOR'S PREFACE	xi

PART I.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIONAL CONDITIONS.

<i>CHAPTER</i>		
I.—	PUPIL IMPROVEMENT THROUGH HIGHER EDUCATIONAL IDEALS	3
II.—	PUPIL IMPROVEMENT THROUGH HELPFUL PUPIL STUDY .	12
III.—	PUPIL IMPROVEMENT THROUGH TEACHER IMPROV- EMENT	26
IV.—	PUPIL IMPROVEMENT THROUGH BETTER SCHOOL HY- GIENE	38

PART II.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIONAL FACILITIES.

V.—	PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL EN- VIRONMENTS	57
VI.—	PUPIL IMPROVEMENT THROUGH BETTER SCHOOL APPLI- ANCES	63
VII.—	PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL APPA- RATUS	69
VIII.—	PUPIL IMPROVEMENT THROUGH IDEAL SCHOOL TEXT- BOOKS	75
IX.—	PUPIL IMPROVEMENT THROUGH SUITABLE SCHOOL LI- BRARIES	81

PART III.

PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL GOVERNMENT.

CHAPTER	PAGE
X.—PUPIL IMPROVEMENT THROUGH TEACHER GOVERNING POWER	93
XI.—PUPIL IMPROVEMENT THROUGH EDUCATIVE MOTIVES	103
XII.—PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL REGULATIONS	112
XIII.—PUPIL IMPROVEMENT THROUGH EDUCATIVE LAW-ABIDING	119
XIV.—PUPIL IMPROVEMENT THROUGH EDUCATIVE PUNISHMENTS	129

PART IV.

PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS MANAGEMENT AND CLASS WORK.

XV.—PUPIL IMPROVEMENT THROUGH SKILFUL CLASS ORGANIZATION AND CONTROL	149
XVI.—PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS METHODS AND DEVICES	158
XVII.—PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL AND CLASS TACTICS	172
XVIII.—PUPIL IMPROVEMENT THROUGH BLENDING OF ORAL AND BOOK CLASS WORK	177
XIX.—PUPIL IMPROVEMENT THROUGH GOOD TEACHING IN LIEU OF EXTRANEous INCENTIVES	184

PART V.

PUPIL IMPROVEMENT THROUGH BETTER SCHOOL AND COLLEGE ORGANIZATION AND CORRELATION.

XX.—PUPIL IMPROVEMENT THROUGH EDUCATIVE CORRELATION OF SCHOOLS AND SCHOOL COURSES	201
-----------------------------------------------------------------------------------	-----

CHAPTER	PAGE
XXI.—PUPIL IMPROVEMENT THROUGH EFFICIENT RURAL SCHOOLS	218
XXII.—PUPIL IMPROVEMENT THROUGH EFFICIENT KINDERGARTEN AND PRIMARY SCHOOLS	241
XXIII.—PUPIL IMPROVEMENT THROUGH SPECIALIZED AND CORRELATED INTERMEDIATE SCHOOLS	253
XXIV.—PUPIL IMPROVEMENT THROUGH SPECIALIZED AND CORRELATED HIGH SCHOOLS	274
XXV.—STUDENT IMPROVEMENT THROUGH PROGRESSIVE AND CORRELATED COLLEGES AND UNIVERSITIES	288

PART VI.

PUPIL IMPROVEMENT THROUGH EFFICIENT METHODS OF TEACHING.

XXVI.—EFFICIENT METHODS IN CONDUCT TEACHING	301
XXVII.—EFFICIENT METHODS IN LANGUAGE-LITERATURE TEACHING	319
XXVIII.—EFFICIENT METHODS IN SCIENCE TEACHING	330
XXIX.—EFFICIENT METHODS IN MATHEMATICS TEACHING	341
XXX.—EFFICIENT METHODS IN ART TEACHING	353

PART I.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIONAL CONDITIONS.

CHAPTER I.—PUPIL IMPROVEMENT THROUGH HIGHER EDUCATIONAL IDEALS.

II.—PUPIL IMPROVEMENT THROUGH HELPFUL PUPIL STUDY.

III.—PUPIL IMPROVEMENT THROUGH TEACHER IMPROVEMENT.

IV.—PUPIL IMPROVEMENT THROUGH BETTER SCHOOL HYGIENE.

THE SCHOOL.

SCHOOL ESSENTIALS.	{ The Pupil. The Teacher.
SCHOOL HELPS.	{ Educative Conditions. Educative Facilities and Appliances. Educative School Government. Educative Class Management and Class Methods. Educative School Organization and Correla- tion. Educative Methods of Teaching—The Five Groups of Studies. Educative School Economy.

SCHOOL MANAGEMENT AND SCHOOL METHODS.

CHAPTER I.

PUPIL IMPROVEMENT THROUGH HIGHER EDUCATIONAL IDEALS.

Progress comes of Ideals in Advance of Reals.—School management and teaching are the twin arts of “pupil betterment.” In school evolution ideals get to be reals, and we advance as we transform the good into the better. In the realm of educational ideals there is a better and a best which ever beckon us onward and upward.

The School utilizes all Educational Influences.—It enables the pupil to make more of himself than he otherwise could. It plans to lead the learner to realize all that is best in him. The school stands for civilization. Wherever we find a teaching body, as among the ancient Jews, we find an advancing civilization. The school is at once the creator, the conservator, and the elevator of civilization. The school stands for human progress. It leads the pupil to profit by the experience of mankind, and enriches him with the accumulated wisdom of the race.

Pupil Improvement is the Central Idea in the School Organism.—We think of all educative agencies, even the teacher, as pupil helps. “Is this the best thing for the pupils?” is the vital test of every school measure. School systems are created, schoolhouses are planned, school appliances are supplied, and teachers are prepared and sustained to promote pupil improvement. The school is for the pupils, and school management and teaching are pre-eminently the arts of pupil betterment. Pupils are led to make the most of themselves by habitually doing their best under the best conditions.

The School Organism is a Unit.—The pupil and the teacher are the school essentials; all other educative conditions and appliances are thought of as school helps. The organism exists for the pupil and grows around the pupil. We think of the teacher as giving vitality, and of school helps as giving efficiency to the organism. The central idea, pupil improvement, includes the law of unity. All things are made to work together for pupil good, and school management becomes the art of unitizing school work.

School Evolution is Organic School Growth.—It means the realization of the possibilities of the school as an organism. The family is the embryo school, but the school, as we think of it, comes of the needs of progressive peoples. Savages feel no need of schools. The early schools of a people are astonishingly rudimentary and inefficient. Schools everywhere have been evolved with advancing civilizations, but educational progress has been slow, and the lines of progress have been zigzag. When the schools of

a people are at their best, we call the period the golden age. Plato taught during the golden age of Athens, and Quintilian instructed during the golden age of Rome. A people may have a golden age, but the golden age of the race will always be in the future, and school evolution will go on as long as civilization continues to advance.

In School Evolution the Ideal gets to be the Real.—All progress comes of ideals which are in advance of reals. Brutes make no progress, for they create no ideals. Individuals and peoples with low ideals, or who look back, retrograde or merely mark time. Savage tribes look back, and so "mark time." Unprogressive peoples like the Chinese worship their ancestors, and so fail to make progress. Luther, when he reached the meridian of life, ceased to reform because he began to look back. Peoples and institutions and individuals make progress so long as their outlook is forward and upward. The best is still in the future. The disciples of Jesus look forward and move forward. At eighty, Gladstone still looked forward and still led the armies of progress. The old education looks back and marks time, but the new education looks forward and moves upward.

The School at its Best is our School Ideal. School evolution comes of the efforts of the people to realize their educational ideals. The educator is not an iconoclast, but a reformer. Rousseau, the prince of anarchists, was not an educator. He planned to destroy all human institutions and go back to Nature. But Rousseau was a world benefactor, for he broke fetters, cleared away a world of rubbish, and inspired educa-

tional reform. Bacon gave the golden rule, "Make a stand on the ancient way and look to find the best way." Pestalozzi pursuing the Baconian plan, gave the world *How Gertrude Taught her Children*, and became the father of the new education. We begin educational reforms by elevating the school ideal, and by managing to have the real grow into the ideal. We learn wisdom even from the serpent, for as the serpent sheds the old skin in forming the new, so we seek to have the old education grow into the new. School evolution is perennial. The new education of to-day becomes the old education of to-morrow. We shall continue through the centuries to approach our growing ideal, "The school at its best."

Pupil Study is the Greatest Thing in the New Education.—Higher ideals of pupil possibilities are conditions of pupil betterment. What is the pupil now? What is he capable of becoming? Our pupil ideal is the pupil with all his possibilities developing into the best manhood. We think of teaching as the process of promoting the growth of the real pupil into the realization of our ideal. As the inventor realizes his ideal in his electric motor, so the teacher realizes his ideal in the lives of his pupils. We see in the pupil all human possibilities. Our educational ideal is man at his best. Teacher and parents, inspired by high ideals, work earnestly for pupil perfection.

The Prepared Teacher is the Vital Factor in the New Education.—Plato and his peerless pupil constituted the greatest university of antiquity. Garfield's conception of the elemental university was President Hopkins on one end of a log and himself on the

other. The pupil and the teacher working together to develop power through mastery constitute the school. The vital contact of pupil mind and teacher mind works the miracle of pupil growth. Pupil effort, stimulated and guided by the teacher, educates. The oneness of the school life comes of the teacher brooding over the pupil, and of pupil and teacher struggling together for mastery. As iron shapes iron, so the vital contact of pupil mind and teacher mind develops power, and leads on to sturdy scholarship. As pupil improvement comes of teacher fitness, school management exalts teacher preparation.

Higher Teacher Ideals will lead to Teacher Excellence.—Even at the beginning of the nineteenth century the teacher ideal of the masses was low indeed, and the teacher counted for little. But as education has advanced, the teacher ideal has become higher and higher. The elevation of the teacher ideal, and with its growth the demand for better and better teaching, is one of the marvels of the century. It has led the states and the nations to provide professional schools, professional literature, and professional associations for the improvement of teachers. Teacher, what is your teacher ideal? I know you have been observing and wondering. You have been thinking about the best things in the lives of the teachers you have known. You have been thinking about the eminent teachers that have blessed the race. You have been thinking about the Great Teacher. Somehow your ideal teacher comes to embrace all teacher excellencies. You yearn to become such a teacher. You can in some degree. Your efforts to realize in yourself your

teacher ideal will make of you a better teacher. But keep in mind that the teacher consecrates his life to pupil betterment. You think not of self nor of fame nor of fortune, but rather of how to lead your pupils to make most of themselves. Man lives for man.

The Best School Helps characterize the New Education.—We marvel at the destitution of the past in school helps. We wonder at the destitution in school helps even in the recent past. Anything was thought to be good enough for children. The wretched make-shifts, still all too common, tell of low ideals and of much lamentable stupidity. Even now, at the dawn of the twentieth century, vastly better provisions are made for the improvement of fine horses than for the improvement of children. We visit a thousand good schools, and fail to find even one having the best facilities for the best school work. But, when the world comes to realize that nothing is too good for children, the people will gladly supply the best school helps. Wiser ideas and more exalted ideals will lead up to better and better realities. Nothing is too good for the child.

Better School Organization makes for School Improvement.—The old-time school was a mob rather than an army. Schools were isolated and unorganized. The nations had not thought of school systems or of graded schools. School organization is the child of the nineteenth century, the century of greatest educational progress. We classify and grade and specialize. We group schools into organic units. We create school systems. The educational chaos of the centuries left the masses to grope their way in the

darkness. Our school organizations, crude as they are, must be largely credited with greatly promoting the world's marvellous educational progress. As we advance we study to improve school organization. Each teacher does well to create an ideal school system, embodying the best things thought out and worked out by mankind. We should spare no effort in promoting the growth of our actual into our ideal school organization.

School Improvement comes of Educative School Government.—Froebel and Herbart sounded the keynote of school improvement—"Educate the whole man, placing the emphasis on conduct and culture." Character-growing is the educational superlative. We now think of school management as the art of promoting good conduct. The movement in the direction of better school government is almost revolutionary. We are beginning to know the child, and are learning to lead our pupils through right motives to right conduct. We govern up to self-government and control up to self-control. In concrete conduct lessons we lead our pupils to form high conduct ideals. We try to so manage that all school work may foster good conduct.

School Management is the Art of vitalizing the School Programme.—The school works in the living present and its programme is a living thing. Last year's programme grows into this year's. The school programme keeps abreast of the times. As we gain a deeper insight into pupil nature and as the realm of knowledge increases we modify our school courses. Looking back means death and bars progress. Some

of the old unprogressive universities boast of having adhered for many centuries to the same dead curriculum. The Chinese are unprogressive, and hence it is fitting that their school courses should be fixed. Among progressive peoples the growth of the school programme must go on forever.

We create an Ideal School and work to make it Real.—Teachers, of all men, you and your fellow-workers alone devote yourselves exclusively to school improvement. I venture to ask you to create as a working model an ideal school having the best school helps. You will visit the best schools; you will read the best things; you will consult the best educators; you will think and imagine and invent and experiment. Your ideal grows and grows, and becomes a thing of beauty as well as utility. Your school environments are the universe, for all things on the earth and in the heavens are school helps. Your school grounds abound in educative devices and elevating influences. Your schoolhouse, with its furniture, and its provisions for pure air and heat and light and exercise and school work, is indeed a model. Your apparatus, laboratory, and library are the best now available. As you work on through the years to make your ideal school a reality, you will wonder at the continual growth of your ideal. The best yesterday gives place to the better of to-day. Your success educates the people, inspires other teachers, and, above all, doubles your power to help your pupils.

School Improvement comes of Good Teaching.—The old schoolmaster groped his way, for he had not studied effectively either himself or the pupil. He was

profoundly ignorant of the laws of growth, and could not do otherwise than blunder on in the dark. The modern teacher knows himself, knows the pupil, knows the subject. He studies to lead his pupils to so put forth effort as to develop power in gaining mastery. He trains his pupils to investigate and find out for themselves. He manages to create and sustain interest, thus securing systematic and effective work. Good teaching is ultimate. In all his teaching the teacher studies to induce good conduct. The art of school management culminates in good teaching.

Pupils must be led to form High Ideals.—We do most for our pupils when we lead them to create and try to realize ennobling ideals. Low and debasing ideals are the bane of mankind. It is the mission of the school to elevate the race by inducing pupils to form higher ideals. The church and the school work together to lift up the pupils through the purest and highest ideals. The story, the biographical history lessons, the school library, school government, and, indeed, all good school work, tend to foster the formation of helpful ideals.

The People must be induced to form Higher Educational Ideals.—Our people are sovereigns, and we can elevate our schools only as we elevate public opinion. This must be done largely through the school. Pupils influence parents. The library, and the best periodicals, and the reading clubs, and the literary societies wonderfully help. Good lectures are invaluable. The semi-annual educational sermons of all the ministers are powerful for good. The newspaper contributes to fostering high school ideals. The teacher

works through all these agencies to create a healthy public sentiment in favour of sustaining the best schools and of making all schools better.

The Ideal Teacher—who can describe such a One?

—Jesus is the perfect teacher. Through the ages great teachers have done what they could to lead the race upward. A host of mighty teachers are now educating the world. Our ideal teacher embodies the best in all. Friend, you earnestly desire to become an efficient teacher. You have a high ideal which you are seeking to realize. You are striving to be what you wish your pupils to become. You are studying to know well yourself, your pupils, and your subjects. You are learning to get close to your pupils and to quicken all their energies. As their friend, you are learning to lead your pupils wisely. More and more you are coming to realize your ideal. Slowly you are struggling up to higher heights, and are becoming a worthy teacher. To you, school management and teaching are becoming the arts of leading pupils up to a grand manhood.

CHAPTER II.

PUPIL IMPROVEMENT THROUGH HELPFUL PUPIL STUDY.

School Management is the Art of Pupil Betterment.—Improvement of the pupil is the central idea. School systems are created and school courses are planned; school methods are devised and school facilities are

provided ; professional schools are created and teachers are sustained to promote pupil well-being. Will this benefit the pupil ? The answer must be the test of every proposed school measure. Is it the best for the pupil ? The answer must determine the continuance, the modification, or the disuse of any existing school condition. God drafts the plan of each life. Education is the working out of the divine plan. Teaching is leading the pupil to make the most of himself.

Pupil Study is Fundamental.—The twin arts of school management and teaching are based on insight into pupil nature. Know your pupils, is a pedagogical imperative. As the botanist knows the growing plant, so must the teacher know the growing pupil. Since it is guided self-effort that educates, the teacher must know the springs of action and the laws of growth. Since teaching is leading, the teacher must be the pupil's wise friend. Since self-knowledge is the key to pupil insight, the teacher must know himself and must learn to look at the pupil as just a younger self. Pupil study, now and always, is the greatest thing in education.

Neglect of Childhood is the Sad Story of our Race.—Through many centuries real child study was not thought of. The human animal grew up like other animals. Repression and force were almost universal. Among ancient peoples only the Greeks studied the young, and so developed a race of mighty thinkers ; only the Hebrews taught their children righteousness. Neglect of the young was the world rule. What a change has come ! Now child study and ways of

promoting child well-being are the world's chiefest interests.

PUPIL STUDY IS OF UNTOLD VALUE TO TEACHERS.

"The chief value of child study seems to lie in two directions: (1) It arouses the teacher to examine and study the mental states of the children before her. This may be called its subjective value. (2) It will in time furnish us with a series of conclusions that will be of practical value in guiding teachers in the arrangement of courses of study, methods of instruction, hygienic and sanitary surroundings of school life, etc. This may be called its objective value."—[NICHOLAS MURRAY BUTLER.]

"Child study brings the teacher into closer rapport with the pupil and establishes that personal bond which brings out the power of the teacher, and especially of a woman teacher. Man may and can run the school as a machine. His voice, physical strength, and character give him the advantage under present methods. When teaching is a work of love—to know children measures the love for them—the woman's kingdom will come in the schoolroom."—[G. STANLEY HALL.]

"The chief value of child study, to my mind, is to enable the teacher to diagnose the personality of the child, to know something of the child's body, mind, and soul. The chief value at present of this diagnosis is to find out children who have defects in hearing, seeing, or in their motor activities. In other words, the chief value of child study is to call the teacher's attention away from 'word cram' to the child himself. It should follow, then, that if the teacher studies the child she should apply the best conditions for the child's growth."—[FRANCIS W. PARKER.]

A PLAN FOR INFANT STUDY.

"Suffer the Little Ones to come unto Me."—This is the keynote of human progress. It remained for Jesus to found the new education on the appreciation of infant possibilities. "Of such is the kingdom of heaven." It remained for Pestalozzi and Froebel and Herbart and their successors to take up the cry

of Jesus and give the world the kindergarten and the primary school. It still remains for the mighty army of educators to profoundly study pupil nature in its advanced phases, and give the world the ideal intermediate school, the ideal high school, and the ideal college.

Study the Real Child.—How may the teacher best study the pupil? Any plan of child study that gives insight into the nature of the growing pupil will prove helpful. The essential thing is actual study of the pupil. You need to study the real child. You must study the little one while it is happy in its play or work and wholly unconscious of such study. You must study your pupils when absorbed in play and lessons. As your aim is pupil knowledge rather than science, you keep the recording angel out of sight. Later on you may make contributions to scientific child study. You investigate for yourself in your own way, but welcome helpful suggestions. The following general plan, to be supplemented by your special method of child study, is believed to be safe and efficient:

What is the Infant?—The budding stage of human growth, from birth to the sixth year, is termed infancy. You will make your studies of some baby friend and live close to it during these marvellous years. You will drink at the fountain. Your own sympathies and intuitions are your best guides. Intelligent mothers work nearest to God and are your wisest counsellors. Your fellow-teachers, who like yourself are studying infant nature, will suggest the freshest things. You find the kindergarten circle an

inspiration. Some good books, revealing the wonders experienced by scientific observers, will prove helpful.* Current kindergarten literature will prove highly suggestive.†

The Precious Half Hours spent with your Baby Friend help most.—You gain the rarest treasures by direct insight. No theories or cumbersome methods or troublesome notes embarrass you. You come into touch with the life of an embryo self. All its buddings intensely interest you. How does the little one learn to walk, to talk, to do things, to know things? You observe with delight that your little friend grows through self-effort, and that from month to month it perceives better, remembers better, and does things better. You find surprises and poetry at every step. You never grow weary in comparing your baby friend with other infants. Heredity opens to you a world of marvels. Evolution takes on new meaning as you indulge a little in comparative psychology. Then you discover, it may be, a striking resemblance between the earliest race development and the development of your infant friend. Thus you come to understand in some degree infancy, and learn to answer reasonably well the question, "What is the infant?"

A PLAN FOR CHILD STUDY.

What is the Child?—The fanciful, trustful stage of pupil growth, from the sixth to the tenth year, is termed childhood. How may you best study the

* Preyer's *Infant Mind*: D. Appleton & Co.

† *Symbolic Education*, Susan E. Blow: D. Appleton & Co.

child? Consider various plans, and then pursue your own plan. Recall as best you can your own childhood experiences. Rely most on your own insight. You will have a special child friend with whom you will spend one or two precious half hours each week. Comparing your infant and your child friends, you gain skill in estimating mental growth. The increase in physical and mental and moral vigour is a constant surprise to you. Then you find delight in comparing the growth of your child friend with the childhood stage of race development. Your interviews with your fellow-students engaged in child study are inspiring and suggestive. Your primary circle secures systematic study. You find child literature wonderfully helpful. You select as helps one or more of the many good books which treat of the child and child education.

You study for yourself a Real Child.—Trusting most to your own insight and your own sympathies, you constantly put yourself in the place of the child and live its life. More and more you come to understand the child. The study of your child friend fits you to enter into the lives of all children. Indeed, each pupil becomes to you a child friend. Every hour spent with your pupils enriches you. Knowing your pupils, knowing their individual wants and ways, you become an intelligent child leader. You get to understand childhood, and become prepared to answer with some satisfaction the question, "What is the child?" You win the hearts of the little ones, and so make the primary school work a constant joy.

A PLAN FOR STUDYING THE BOY AND GIRL.

What is the Boy?—The exploring, the imitative, the habit-forming stage of growth, from the tenth to the fourteenth year, is termed boyhood and girlhood. Coming between childhood and youth, this is designated as the intermediate culture period. The burning desire to find out, the restless activity, the astonishing imitative tendencies, make this pre-eminently the exploring and habit-forming stage of development. How are we to get to understand the intermediate pupil? We begin by vividly recalling our own experiences during this period.

You spend Precious Hours with your Boy or Girl Friend.—You live close to your young friend—studying, reading, playing, exploring with him. You lead him to talk with you about the things which most interest him. You observe him in his associations with others. You compare his activities with infant activities and with child activities, and marvel at the growth. You compare your friend with other boys and girls, and somehow you come to look upon each pupil as a special friend. You never weary of tracing resemblances between the growth of your boy friend and the boyhood stage of race growth. You interview teachers who are earnestly studying the intermediate phase of pupil growth. You read the choicest juvenile literature, and study one or more suggestive books treating of boy and girl growth and culture. You gain inspiration at your intermediate circle for pupil study. Thus you come to know reasonably well your boy or girl friend, and so begin to understand all boys

and girls. Thus you become able to answer with considerable satisfaction the question, "What is the boy?" You somehow manage to make each boy and each girl your friend, and so make the school work a constant delight.

A PLAN FOR STUDYING YOUTH.

What is the Youth?—The restless, formative stage of pupil growth from the fourteenth to the eighteenth year is termed youth. About the beginning of this period there is almost a leap in both physical and mental growth. Irrepressible yearnings for great things begin to sway the youth. Egoism begins to give place to altruism. Duty impulses become commands. The imitative activities of the boy become the creative activities of the youth. Will asserts its sovereignty, and the youth must do or die; action is salvation. During these restless years life ideals are formed, and the trend is given that leads on to excellency. How may we with greatest profit study our high-school pupils? The wise teacher will continue to study the individual pupil. You make some youth your special friend and companion and spend with him one or two hours each week. You have learned to put yourself in the place of the infant, the child, the boy. Your youthful days are readily recalled. You find it easy to put yourself in the place of your new friend, and thus you come to understand him. You converse with him, read with him, investigate with him, sympathize with him in his hopes and fears, in his joys and sorrows. You compare him with other youths and with your younger friends. You

observe him in his daily work and in his association with others. You read the best books treating of youth culture. You spend an hour each week in your high-school circle, consecrated to the study of youth. Thus your high-school pupils become an open book to you, and you can for yourself give an intelligent answer to the question, "What is the youth?"

A PLAN FOR STUDYING MANHOOD.

What is the Young Man?—The differentiating, crowning stage of pupil growth is termed young manhood. We include in this period college and university life. From eighteen to twenty-five we think of the pupil as a young man or a young woman. Pupil life closes with this period. The college stands for the highest stage of school culture. How may the teacher best study the student? Self-knowledge is the key. You think of the student as another self, only a little less matured. Your memories of your own student life are fresh, and you find it easy to put yourself in the place of the student. In our times young men and young women act important parts in all measures of reform. You work with them in these endeavours and form close and beautiful friendships. You are one with the students in original research. You study with them literature, and psychology, and ethics, and sociology, and philosophy. Then you find the meeting of your Student Study Circle invigorating and helpful. You get to understand the student, and find yourself prepared to answer with a degree of satisfaction the question, "What is the young man?"

What is the Man?—The working stage of human growth is termed manhood. It extends from the twenty-fifth year to the end of life. The Humboldts and Gladstones have measurably abolished old age. We do not think of the man as a pupil. In the school of life a man no longer needs a guide; he works out his own salvation. Does the teacher need to study the man? Yes, you must become acquainted with human life from the cradle to the grave. Biography and sociology and literature and philosophy and history are manhood studies. You need to study the growing self in all the stages of development, that you may become accustomed to think of a life as a whole. In converse with your bosom friends you gain deeper insight into human nature, and come to understand all men. You mingle with the world's workers, and feel the mighty impulses that affect mankind. Biography and history and literature and sociology and philosophy become living realities, and you realize the past in the present.

WE STUDY THE PUPIL AS A PHYSICAL BEING.

Mental Betterment depends on Physical Betterment.

—The teacher profoundly studies the physical conditions of growth. The self lives in and works through a material body with material environments. The teacher must know more than the physician, for to develop a vigorous physical manhood is a greater work than to heal disease. The teacher studies to command the best hygienic conditions, and to lead pupils to form the best hygienic habits. Thus is laid the foundation for a vigorous manhood.

6194
6094



The ability of a Pupil to do School Work is measured by his Physical Strength.—This law demands far-reaching reforms in school management and in teaching. The teacher must study the physical as well as the mental abilities of the learner, and adapt the work. Most pupils can profitably do the average work; some can safely do more; while a few are physically unfit to do the work of the class. Science in the near future will doubtless give us easy rules of measurement to determine, in some degree, classification and management and methods; but most must depend on the insight of the teacher. Good common sense must supplement all tests.

Vision is tested.—Defective vision is fearfully prevalent. Probably one fourth of our pupils suffer in some degree from impaired sight. The teacher, trained to test the senses, tests the eyes of each pupil. Those suffering from defective vision are seated with reference to the light. When deemed advisable, parents are requested to consult an oculist, and secure when necessary properly fitted glasses. Great suffering and irreparable loss are thus prevented. The teacher studies to prevent as well as to remedy defective vision.

Hearing is tested.—Probably one pupil in five suffers from defective hearing. The teacher tests the ears of each pupil. Defectives are given favourable positions. Parents are urged to consult a specialist. How many cases of suffering and of stunted lives may be prevented by these simple tests! The teacher lives close to the pupil, and finds out and seeks to remedy physical defects. Physical culture goes on side by side with mental culture and moral culture.

WE STUDY THE PUPIL AS A SELF.

What goes on in the Pupil's Mind?—Not to know, is to confess unfitness for teaching. As the botanist studies plants in their properties, so the teacher studies the pupils in their activities. Pupil activities are to the teacher what the scale is to the musician. The study of pupil activities, pupil growth, pupil processes, and pupil motives does most to prepare teachers for their work. All other plans and devices must be made auxiliaries. These studies keep the teacher face to face with mental life.

Each Self is a Type of all Selves.—You are conscious of perceiving, apperceiving, and representing; of feeling self-emotions, social emotions, and emotions of the true, the beautiful, the good; of attending, determining, and executing. You think of the pupil as another self, doing feebly what you do vigorously. What goes on in your mind goes on in the pupil's mind. The elemental soul activities are ever the same; each self is a type of all selves. Thus it is that you are able to understand and to lead your pupils.

He who knows himself knows all Men.—The only road to pupil knowledge is self-knowledge. Self-knowledge is the key to all knowledge. You experience all soul activities. You look within and actually see yourself thinking and admiring and resolving. With a living teacher you study an easy psychology, and learn to describe and explain the phenomena of mental life. You study experimentally the interaction between a self and his organism. You study the larger self in history and literature and life, and

become rich in the race experience. You marvel how the mists begin to clear away, giving you clear insight into what goes on in the minds of your pupils.

METHODS OF PUPIL STUDY.

Adopt some Plan for Pupil Study.—The essential thing is real child study. Any plan that leads teachers to observe children and to gain insight into pupil nature does good. You observe for yourself and also study suggestive books and journals and plans for child study. Dr. G. Stanley Hall, the acknowledged leader, presents extremely valuable as well as practical plans for pupil study. Col. F. W. Parker has done much to make all teachers original investigators in the study of the child. Prof. Earl Barnes has worked out valuable plans of pupil study on the side of morals. His suggestions for methods of studying children are golden. Our educational literature is already rich in plans for pupil study. The presentations at our educational associations and in our summer normals and in our child study circles are fresh, suggestive, inspiring. The young teacher is in danger from the very abundance of good things. You will do well to ponder long before adopting a plan for systematic pupil study. What will most benefit yourself and your pupils? Remember that David with his crude sling was far more efficient than David in Saul's elaborate armour.

Methods of studying Children.* “Whatever success has attended educational efforts in the past has

* Prof. Earl Barnes, *Studies in Education*.

been due to the direct or the indirect study of human nature. The newness of the movement of the last ten years consists in the fact that this study has become self conscious; that it concerns itself with the individual during the period of childhood and youth; and that it uses, to some extent, the methods of modern inductive science. Child study is at present largely an applied science; it has to-day the same relation to psychology that horticulture has to botany.

" Practically, in our real work with children we probably draw more upon our memories for an interpretation of their acts than upon any knowledge we have gained through the study of other children. In our own work we have found no method more useful for students and teachers who wish to understand children than that of carefully writing out their own memories along vital and definite lines.

" All strong advance in science has so far been made through the direct study of reality, and probably one comes nearest to the reality with which education deals when he stands in the immediate presence of a child. Direct studies on individual children must give us whatever of final knowledge we achieve concerning children. When we come to apply the same skill and honesty to the study of the natural history of childhood that we now devote to botany and zoology, we shall make great progress in our treatment of children.

" The seating and lighting of buildings, the arrangement of programmes, the making of text-books, the assigning of lessons, all the problems of discipline, and, still more, the determining of each individual's

personal qualities against this background of averages —all this makes the demand for such studies imperative.

“ If a man goes about his daily work with his eyes and his heart open ; if he lives over his childhood’s life, with an honest desire to see what kind of a child he was and what kind of a man he is, quickening his memory with childish records and autobiography ; if he studies children under carefully arranged conditions, bringing the same fair-mindedness and persistence to his work that the scientist brings to his laboratory ; and if he brings all these scattered studies into their due relations by setting them in the background of general law, based on large quantitative studies, he will accomplish all that he can reasonably hope for in these days of beginnings.”

CHAPTER III.

IMPROVEMENT OF THE PUPIL THROUGH IMPROVEMENT OF THE TEACHER.

We think of the Teacher as an Educator.—The teacher, like the poet, is made as well as born. The most gifted teachers are the hardest workers, and work develops power. The purpose of the school is educative, and the teacher is pre-eminently the educator. Educational conditions and facilities are important, but the teacher is the vital force. All good comes through lawful self-effort, but it is the teacher

who leads his pupils to do their best in the best way. We lead our pupils to make most of themselves. The teacher is the pupils' model as he gets closest to them and stands for the best in their young lives. He is the pupils' instructor, and he leads them step by step to master the realms of knowledge. He is the pupil's guide, as he manages to have them so put forth effort as to develop power. He is the leader, for he leads pupils on in their efforts to attain. He is the pupils' friend, for he studies the well-being of learners and awakens in them all ennobling impulses and aspirations. Improvement of the teacher is the greatest of all benefactions, for it means the uplifting of all men.

PROFESSION OF TEACHING.

Teaching is a Profession.—The advancement of the teaching profession will do most to promote teacher improvement. At the extremes, even now, the teaching profession stands among the first. Kindergartners are professional teachers, as are the faculties of our colleges and universities. But our teachers in our elementary and secondary schools as a class are still semi-professional and non-professional. For the improvement of teachers, the transformation of the great body of instructors into professional teachers is an educational desideratum. To this end, tenure of office, adequate salaries, specialization, teaching as a career, and teacher culture are essential conditions.

1. **Permanency is Fundamental.**—Competent and tried teachers should hold positions during efficient service. The civil service reform should certainly include teachers. No other economic blunder so tends

to deprive the teaching ranks of the most gifted teachers, or to so discourage thorough preparation for teaching, as the uncertain tenure of office. Extending the civil service reform to teachers will do most of all to make teaching a profession. We can scarcely conceive of the wearing anxiety and the eating worry which teachers suffer on account of annual elections. It is simply barbarous.

2. Adequate Salaries are Essential.—The fact that the salaries of our teachers have been quadrupled during the closing half of the nineteenth century is highly encouraging. Many educators now get as large salaries as the judiciary, as the ministry, as the State officers. The best positions now pay salaries of \$5,000 and \$10,000, and even \$15,000. But the average pay of our teachers is far below that of our lawyers and doctors and business men. Indeed, the salaries of the great body of our teachers are shamefully inadequate. Teaching demands the best talent, the most thorough preparation, and the means for constant growth. Generous salaries will work like magic in the promotion of teacher betterment, and in transforming the trade of teaching into the profession of teaching.

3. Specialization is Cardinal.—Concentration is essential to the highest efficiency. The crudeness of very much of our school work comes of our failure to utilize specialization in teaching. The kindergartner and the college professor are specialists, and hence our kindergartens and our colleges are marvels of efficiency. Our best primary teachers, like our kindergartners, are becoming specialists in child cul-

ture. It is believed that in the near future each high-school teacher and each intermediate teacher will be a specialist, and hence a professional teacher. Even rural teachers will come to be specialists in ungraded school work. Specialization enables the teacher to become an educational artist, thus greatly elevating the teaching profession and wonderfully improving our schools.

4. Teaching must be made an Inviting Career.—Teaching must offer desirable careers in order to enlist the most gifted. As the century closes, it is safe to say that no better field of human achievement is open to our young men and women than the higher education. In no other profession is promotion speedier or the reward surer. No other career gives higher satisfaction or commands greater respect or develops a grander manhood. College presidents take rank with governors, and college professors and city superintendents take rank with authors and statesmen. But to the rank and file of the mighty army of teachers, teaching can not yet be considered an inviting career. True, a marvellous change has taken place. In the past, history and literature exhibit the pedagogue as the butt of ridicule; now the teacher stands for the best in his community. No other officer of the State gets so near to the people or does so much for human elevation. But as a life career, the outlook for the mass of our teachers is not cheering. Positions are still precarious, and salaries are still pinchingly small. Worst of all is the hopelessness as to merited promotion. Teacher betterment demands such measures as will multiply desirable positions

and make merited promotion reasonably certain. Then we may hope to see large numbers of our gifted youths select teaching as a profession and thoroughly prepare themselves for the work. Then, like lawyers, teachers will be content to begin at the bottom and work up. The certainty of success through merit will inspire heroic effort, and lead the teacher to become an educational artist and a power for good.

5. Teaching must be made a Learned Profession.—The prepared teacher is the world's great want. As the nineteenth century closes, it is humiliating to be compelled to say that of our four hundred thousand American teachers scarcely one third are well prepared for their work. A majority of our teachers are deficient in culture and in professional education. Many even of our college and university professors do not know how to teach. But the star is shining in the east. Our universities are creating departments of education side by side with the departments of law and medicine. All the States now sustain systems of normal schools. Sumner normals with their quickening influences now reach all teachers. Teaching is rapidly becoming a profession, and we must make it in truth a learned profession. The teacher must stand for culture.

THE IDEAL TEACHER.

We think of the ideal teacher as gifted, as skilled, as cultured, as devoted, as progressive. How are we to produce such teachers? How are we to fill our schools with such artists?

1. The World wants Gifted Teachers.—Since the teacher is the pupil model, the pupil leader, the pupil

inspirer, he must be superior physically, mentally, morally. Only gifted men and women should become teachers. Youths who manifest teaching abilities should be encouraged to choose teaching as a profession. Philip thanked the gods that his son could have Aristotle for his teacher. All parents do well to be supremely thankful that their children may have gifted teachers. Surely the world should encourage gifted youths to devote their lives to teaching. Surely the most gifted should elect teaching as a profession.

2. Culture characterizes our Ideal Teacher.—Culture conditions good teaching. Culture means the development of character and of taste as well as the attainment of scholarship. Our schools and colleges stand for culture. At the dawn of the twentieth century it is safe and reasonable to require that our elementary teachers shall be high-school and normal-school graduates, and that our high-school teachers shall be trained college graduates. This reasonable requirement will give us cultured teachers. Such teachers will command respect and will be called to leadership. Teaching will be recognised as a learned profession.

3. Professional Preparation is Essential.—In the new education the twin arts of school management and teaching are based on the science of education. The prepared teacher works in the light of the educational thought and experience of all the ages. In the old education there was no real basis. The old schoolmaster, ignorant of pupil nature, of educational law, and of educational economy, literally groped his way. His many legitimate successors in our schools and colleges blunder on in well-worn ruts.

The creation of professional schools for the professional education of teachers emphasizes the essential characteristic of the new education. Scholarship is one thing, and skill in teaching and school management is quite another thing. Surely the teacher needs to study pupil nature in the light of educational psychology, and teaching and school management in the light of the history and science of education. Surely the teacher needs to practise these arts under the guidance of skilled educators before assuming the weighty responsibilities of the educator. As a legal education is made the condition of admission to the bar, so should a pedagogical education be made the condition of admission to the desk. Nor is the time distant when in our own land, as now in other lands, persons without a professional preparation for teaching will be debarred from the brotherhood of teachers.

4. Like all Artists, the Ideal Teacher is Devoted.—

Teaching demands consecrated lives, and the entire time and energies of the most gifted. Just think of the tremendous work the teacher undertakes; he assumes the fearful responsibility of leading his pupils to make the most of themselves. Other artists think of time; the teacher thinks of eternity as well as time. His pupils are to shine brighter than the stars forever. The teacher spirit is the spirit of devotion and consecration, and this is the crowning preparation for the work of teaching. Your ideals are high, and you feel an irrepressible longing to realize these ideals. You intensely love your pupils, and see in them boundless possibilities. You feel an intense interest in your work, and day by day you strive to do

the most possible for your pupils. The teacher is devoted.

5. The Ideal Teacher is Progressive.—Only growing teachers are fit to lead growing pupils. The founder of the Oswego Normal School, the American Pestalozzi, Dr. Edward A. Sheldon, has been a leader in educational reform for four decades; yet he introduces his latest outline of work with these golden words:

We do not undertake to say, nor do we presume, that the subjects taken up are in all cases the best that might be selected, nor that the order of arrangement is in all cases the best possible. All that we can say is, that at the present time the scheme presented is the one we are following. We have no expectation that it will be the same another year; in fact, our plan is to change from time to time. We shall come very far short of our privilege and duty if we do not continue to grow in this work, and all growth involves change.

What an admirable object lesson of the spirit of the new education and of the progressive teacher!

SCHOOLS FOR EDUCATING TEACHERS.

1. Universities sustain Departments of Education.—Sir William Petty, in 1647, said, "Education should be seriously studied, and should be the business of the ablest and best persons." Herbart, early in the century, originated the movement to make pedagogy a university study. As with medicine and law, the movement has slowly gained momentum, and one by one the universities are coming to place the department of education side by side with the departments of law and medicine. The course requires four years for its completion, but students electing the profession of teaching do the first and second years' work as a

part of their junior and senior college courses. Then two years are devoted to strictly professional work. Besides the groundwork, teachers prepare for special lines of professional work.

2. Colleges sustain Chairs of Pedagogy.—Since a large proportion of our college graduates elect teaching, our colleges realize the necessity of providing for the professional education of teachers. College graduates are not recognised as teachers or doctors or lawyers. During the junior and senior years students electing teaching take pedagogy as a part of the college course. An able educator in this position works wonders for the students and for the college. Each professor comes to give annually a course of lessons on methods of teaching his specialty. Graduates may complete their professional education in the university, or may at once become teachers.

3. State Normal Schools educate Elementary Teachers.—Persons who apply for admission are to have strong bodies and active minds, and are to be high-school graduates. The course embraces three years' work. Professional education enters into the warp and woof of all the work, but much of the very best academic work is done during these years. Culture is essential in teacher preparation. It is unfortunate that comparatively few normal graduates ever enter the college or the university. All educational countries now sustain normal schools. These schools give us our trained elementary teachers, and each is a centre of educational life and progress. Of all school agencies, our State normal schools have done most for the elevation of our elementary schools.

4. City Training Schools educate City Teachers.—

Our great cities provide schools for training their own teachers, and limit admission to high-school graduates. Our high schools and academies in the smaller towns find it necessary to give some pedagogical training to their graduates who elect teaching. Many high schools now give their pupils practice in teaching in addition to pedagogical instruction. The superintendent and the high-school principal in our towns often give professional instruction to pupils who purpose teaching. The importance of special preparation for teaching is thus emphasized.

5. Summer Normal Schools help all Teachers.—

These are short-term normal schools, continuing from two to eight weeks. The purpose is to assist as much as possible the great body of untrained teachers, and afford professional teachers special opportunities for advancement. These schools supplement but do not take the place of the regular professional schools. They are doing a vast amount of good work, and are wonderfully promoting educational progress. The university summer normals afford rare opportunities for advanced work in special lines. We have in these schools practical university extension.

6. Thorough Professional Preparation works Teacher as well as Pupil Good.—

Good positions await prepared teachers. Persons who make teaching a trade will gradually disappear from our schools. All positions will be filled by trained teachers. The preparation for teaching demands even more thorough professional education than preparation for practising law or medicine. For the advanced work in teaching, a

four years' course is not too long. The teacher thus prepared will work in the light of all the ages. To him teaching will be truly the art of promoting human development. For elementary teaching, the three years' course of our State normal schools is not too much. Only high-school graduates will, in the near future, be admitted to these schools. Three years are devoted to broader culture, to pedagogical instruction, and to practise teaching. During the second and third years the normal pupils are grouped for special lines of school work-- for rural schools, for kindergarten work, for primary work, for intermediate work. Intermediate teachers are prepared to teach special studies. Thus all normal work becomes fruitful in the highest degree because it becomes specialized work.

7. Professional Schools mean Educational Artists.-- Educational schools produce teachers skilled in the art of producing mental and moral growth, just as medical schools produce physicians skilled in the art of healing. The teaching art is *sui generis*. Other artists create forms, but the teacher deals with the self-forming. Mind is self-acting. Pupil self-effort educates. The pupil moulds himself, forms himself, learns through his own efforts. Well-directed self-effort works its miracle of growth. Teaching is the art of stimulating and guiding self-activity. The artistic teacher knows how to awaken effort and how to wisely direct effort. The meaning of teachers' schools is that gifted youths, instructed and trained by skilled educators, may through indomitable self-effort become educational artists.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIVE CONDITIONS

I. HIGHER EDUCA- TIONAL IDEALS.	1.	1. Define	{ (1) Hygiene. (2) School hygiene.
	2.	2. School Hygiene.	{ (1) In the past. (2) In the present.
	3.	3. Home Hygiene.	{ (1) Importance. (2) School influence. (3) Mother's society. (4) Lectures and literature
	4.	4. Play Hygiene.	{ (1) Play hygienic. (2) Play educative. (3) Hourly recess. (4) Open air best. (5) Physical culture. (6) Lunch and play.
	5.	5. Hygienic Ventila- tion.	{ (1) Perfect ventilation. (2) Poor ventilation. (3) Window ventilation. (4) Ventilating stove. (5) Hourly recess.
	6.	6. Hygienic Heating.	{ (1) Desideratum. (2) Defective heating. (3) Systems of heating. (4) Open fireplace. (5) Economy of.
	7.	7. Hygienic Light.	{ (1) Perfect lighting. (2) Window shades. (3) Windows. (4) Favour the eyes.
	8.	8. Cleanli- ness and Toilet.	{ (1) Untidiness. (2) Importance. (3) School closets. (4) Cloakrooms.
II. HELP- FUL PUPIL STUDY.	9.	9. Hygienic School Desks.	{ (1) Single desks. (2) Adjustable chair and desk. (3) Study desk. (4) Reasonable adjustment.
	10.	10. Hygi- enic Hab- its.	{ (1) Regularity. (2) Cleanliness. (3) Abundant sleep. (4) Rational food habits. (5) Good clothing habits. (6) Cheerfulness. (7) Law-abiding habits.
	11.	11. Interest in School Hygiene.	{ (1) Interests all men. (2) Personal equation. (3) Hygienic skill. (4) Parental co-operation. (5) Hygienic literature.

CHAPTER IV.

IMPROVEMENT OF THE PUPIL THROUGH THE ADOPTION
OF A BETTER SCHOOL HYGIENE.

School Management is the Art of bettering the Pupil's Physical Condition.—Light, heat, fresh air, exercise, furniture, books, school work, school recreation, school government, school programmes, and pupil habits demand the utmost consideration, for they are the conditions of pupil growth. The rational search lights of all the ages are now turned in full blaze upon the schoolroom. “Give us whatever tends to best promote pupil improvement” is now the world's highest note.

Hygiene is the Art of Health.—Health, like all other good things, comes through law-abiding. Fortunately, the laws of health are few and plain. Good parentage, sunshine and fresh air, good food and abundant sleep, cleanliness and exercise, cheerfulness and congenial occupation, hygienic habits—these are the conditions of good health. For the teacher not to study hygienic laws, and not by example and precept and training to get pupils to live them, is surely criminal.

School Hygiene is the Art of promoting the Physical Well-being of Pupils and Teachers.—Physical betterment conditions spiritual betterment. A self is embodied in a physical organism having physical environments. A self acts best when his body with its environments is in the best condition. As the race

has come to realize the tremendous importance of physical culture, the wisdom and the resources of the world have been taxed more and more in the interests of practical school hygiene.

The Woeful Neglect of School Hygiene.—Some good day, we doubt not, the nations will vie with each other in their efforts to secure the best possible school hygiene. In the past men studied brute hygiene, but seemed to have been strangely oblivious to the demands of human hygiene. Their barns were hygienic models, but their schoolhouses were execrable. They produced fine horses, while they left their children to suffer all the evils of unhygienic school life.

Even now, at the dawn of the twentieth century, stable hygiene seems to be far in advance of school hygiene, and the beneficent lessons of scientific school sanitation still fail to benefit the masses. Excellent sanitation in our schools is still the exception. The rule is such wretched school sanitation as to practically check the rapid increase of population.

Pupil Good demands Better Home Hygiene.—This must come largely through the school. The lessons in physical culture teach the pupils the conditions of vigorous health and lead them to form hygienic habits. Food, sleep, pure air, cleanliness, clothing, are carefully considered. It is marvellous how rapidly home life improves when the school life becomes practically hygienic. The teacher studies to secure home co-operation, carefully guarding against creating antagonisms. So much of the physical well-being of pupils is dependent on home hygiene that educators do well to give special attention to the physical

improvement of home life. Very much may be accomplished by the monthly meetings of mothers and teachers, now becoming common. Sensible lectures and reasonable hygienic literature supplement the work of the school. Home hygiene improves as school hygiene grows better.

PLAY AND GYMNASTICS.

Play is eminently Hygienic.—Recreation makes possible the best work.

The kindergarten, by utilizing play, has made a large contribution to the well-being of the race. Work fatigues, exhausts the brain cells; play rests, recuperates exhausted brain cells. Play is recreation, for it is free, spontaneous activity. It breaks the spell of work and care. From infancy to age play is a boon to all workers. A self while taking recreation relaxes effort and roams fancy free. Thus the tired brain is given time to recuperate. A student who takes ten minutes' suitable recreation each hour will come out ahead of the student who without breaks pores over his books hour after hour. The men of thought as well as the men of action double their efficiency by taking regularly helpful recreation.

School Work is Educative when Pupils are Fresh.—Drudgery hurts, and does not help. All forced effort made when the pupil is exhausted is injurious. Work, and then play, is the divine plan. We may easily quadruple the educative value of our schools by studying to keep pupils fresh. Strong men find recreation a necessity; how much more must immature pupils play as well as work, and thus grow. Suitable

school plays recreate but do not exhaust. He who helps to lead the school world to play wisely deserves to be crowned as a benefactor.

A Recess at the Close of each Hour is the Perfect Economy. —The hygienic and educative benefits of the hourly recess are incalculable. Young children soon become fatigued, and so we make their periods of work very brief. The periods of work are lengthened as the pupils advance. The fatigue limit is a great practical study. Much may be done to keep pupils fresh by having easy work follow difficult work. Change rests. The song and the story rest. But frequent periods of absolute freedom are indispensable. In the schools of the future, it is believed, a recess of ten minutes will be given at the close of each hour.

Play in the Open Air is most Hygienic. —Suitable playgrounds with the best play-provoking facilities may safely be counted among the most important hygienic agencies. All real play is essentially free and spontaneous. Yet at no time is wise supervision more important than during play. Hurtful plays must be discouraged and the most helpful plays fostered. The teacher feels the play impulses, and so guides by suggestion without abridging freedom and spontaneity. Well-ventilated, well-lighted, and commodious playrooms for use during inclement weather are helpful when the supervision is judicious. However great the cost, these playrooms pay largely in increased pupil vigour.

Lunch and Play occur together. —Teachers and pupils, during the half-hour noon recess, eat lunch and

indulge in light amusements. The playgrounds are used in pleasant weather and the playrooms in inclement weather. This plan has many advantages, and works well when the teachers enter into it heartily. The hygiene of school lunch for teachers and pupils deserves thoughtful study. Probably the least hygienic is the plan of having pupils rush home, bolt a hearty meal, and rush back again. The desideratum is suitable lunch, eaten without haste and followed by gentle play.

Systematic Physical Culture is indispensable.—In our best schools physical culture goes on side by side with mental and moral culture. Graded physical exercises give pleasure, gracefulness, and vigour. During the pauses pointed suggestions are given in practical hygiene. The gymnastic exercises, when adapted to the pupils and well managed, are educative as well as hygienic. They develop habits of exact obedience, train pupils to work in harmony with others, and give artistic command of the body. Gymnastics require considerable will effort, and hence do not take the place of the spontaneous plays of the recess. The Germans emphasize systematic gymnastics, but neglect play; the English exalt play, but neglect systematic physical culture; the Americans and the French, after the fashion of the Greeks, emphasize both play and gymnastics.

SCHOOLROOM VENTILATION.

Perfect Ventilation is the Aim.—Pupils and teachers, in order to do their best, must work in pure air at the proper temperature. Perfect ventilation keeps

the air within the schoolroom as pure as the air without, and school hygiene seeks to approximate this ideal. Improved systems for ventilating school buildings have accomplished wonders. Our best buildings are now fairly well ventilated, but even these await immense improvements.

Most Schoolrooms are Badly Ventilated.—The rule is poor ventilation, and good ventilation is the exception. In a vast majority of our schoolrooms the ventilation is execrable. A father called at the schoolroom to see his little daughter. Afterward he said: "It makes me sick to think of that odour now, yet for hours my child had been breathing that poisonous air. The teacher did not know that the air was horrible." The author could say the same thing about a thousand schoolrooms which he has visited. Yet teacher and pupils, even under these conditions, are expected to do the best work!

Abundance of Pure Air must be secured.—To begin with, all schoolrooms must provide for each pupil at least twenty-five square feet of floor space and three hundred cubic feet of air space. For forty pupils a schoolroom thirty by forty by ten feet will meet the conditions, but no schoolroom should be less than thirteen feet high. Then the ventilating apparatus must provide for regular change of air, so as to afford for each pupil each hour thirty-five hundred cubic feet of pure air. Great advances have been made, but no system of ventilation has proved fully satisfactory. School architecture must manage to make ventilation, heating, and lighting fundamental. In some way the best must be made effective in all schools. In the

smaller and inexpensive rural schoolhouses the best ventilation and heating is now secured by having in each schoolroom a small open fireplace and also a ventilating stove with well-constructed ventilating flues. This arrangement, with judicious window ventilation, and by having a recess of ten minutes each hour, secures reasonably satisfactory ventilation. It has the advantages of being automatic.

HEATING SCHOOL BUILDINGS.

Proper Temperature conditions Health and Study.—

School hygiene values the thermometer and requires its constant use in every schoolroom. We study to keep all parts of the schoolroom at a uniform temperature of from sixty to seventy degrees; the standard is sixty-eight degrees. This is accomplished reasonably well in small buildings with the ventilating stove, the open fireplace, the ventilating flues, and judicious window ventilation. By all means we must so manage that the pupils do not suffer with cold feet. Steam heating, hot-water heating, and hot-air heating are about equally successful in giving reasonable satisfaction. No system should be tolerated which does not furnish the heat by indirect radiation. It is not pleasant to denounce the hot stove in the middle of the schoolroom, still found in a majority of our schoolhouses. The arch enemy of school hygiene could not easily have invented a crueler means of torture or a more unhygienic mode of heating. Pupils near the stove burn, while those most distant almost freeze, and nearly all suffer with cold feet.

Normal Temperature is Economic as well as Hygienic.—Teacher and pupils in a well-ventilated, well-heated, well-lighted schoolroom do more work and better work than would otherwise be possible. Government becomes comparatively easy. Interest and attention are far more readily secured. Pupils are bright and happy and healthy. Contrast such a schoolroom with the stupidity and inattention and disorder in a poorly ventilated, poorly heated, poorly lighted schoolroom. Every consideration urges parents, officers, and teachers to spare no effort to secure the necessary conditions for the best school work.

LIGHT IN THE SCHOOLROOM.

The Light within the Schoolroom should correspond with the Light without.—The alarming increase of defective sight among pupils intensifies the importance of having well-lighted schoolrooms. It is wise to study Nature. Ideal ventilation secures as pure air within as without the schoolroom. Ideal lighting equalizes the intensity of light without and within the schoolroom. The nearer the light in all parts of the schoolroom corresponds with the light without, the better for teacher and pupil. Pupils go in and out without the painful feeling experienced when schoolrooms are darkened. Window shades and blinds are often made instruments of torture, and should only be used in schoolrooms to prevent the glare of sunlight. For this purpose Venetian blinds with movable slats are the worst device known, and semi-opaque shades are the best.

All Parts of the Schoolroom should be Well Lighted.

—Experts tell us that there should be no windows in front of the pupils, and that the best lighting requires windows at the pupils' left side only. But we must think of ventilation as well as lighting, and this may require windows on two sides of the schoolroom, the left side and at the back. At the least, the window surface should equal one tenth of floor surface. No schoolroom should be less than thirteen feet in height, and the tops of the windows should be within a foot of the ceiling and from eight to ten feet in height. As the shades roll from the bottom of the window, the light falls first from above.

Pupils are trained to favour their Eyes.—Straining injures. Prolonged staring hurts. We train our pupils to use their eyes gently and sparingly. The mind does the hard work. The object is observed, and the pupil closes his eyes and pictures it. The pupil reads the paragraph once, and closes his eyes and thinks it many times. The pupil is trained to let his eyes rest gently on the printed page, while the mind does the work. How much the judicious teacher can do in training pupils to save their eyes, not only in the schoolroom but also at their homes!

CLEANLINESS AND CONVENiences.

Schoolrooms must be kept Clean.—Some travellers tell us that everywhere they found our school buildings untidy and overheated. As cleanliness is next to godliness, must we not class untidy schoolhouses as tending to godlessness? Many schoolhouses which have been used for two or three decades, they tell us,

have never been scrubbed. Many schoolrooms are simply filthy, and nothing is more unhygienic than dirt and filth. Every consideration demands schoolroom cleanliness. Surely cleanliness should extend also to the school grounds.

The Civilized Schoolhouse Toilet is a Hygienic Desideratum.—Nothing in school hygiene demands more thoughtful consideration. Everywhere separate closets are provided for each sex, but, as a rule, the closets are not convenient, are not kept clean, are not hygienic.*

The revolutionary device of leaving pupils free to visit the closets at will is deemed of incalculable hygienic value. Having pupils "ask," a relic of ancient school barbarism, works exceeding harm.

Hygienic Cloakrooms help.—We rarely find these necessities entirely satisfactory. All teachers insist that our cloakrooms should be well ventilated, well lighted, well heated, and convenient. Are they? Are the arrangements such that pupils can deposit or take their wraps while passing in line? Teachers, you can do more than all the rest of the world to secure school cleanliness, civilized toilet, and hygienic cloakrooms. It requires courage even to speak of these things. But the management of these matters is a part of our professional work. It is ours to plan and work for the good of our race. School boards rarely refuse to listen to reasonable suggestions. A lecture occasionally on school hygiene does much to educate the people.

* The teacher should not fail to read *School Closets and Civilization*, by Superintendent A. P. Marble.

HYGIENIC SCHOOL DESKS.

Hygienic school desks and chairs are a school desideratum. They promote pupil comfort, and thus promote good order and vigorous study. They favour hygienic positions of the body, and thus promote health.

1. **The Single Desk and Chair are Preferable.**—The double desk must go. With single desks pupils have more air space, more freedom, and better facilities for study. Control is much less difficult, and the hygienic gains are considerable. In another decade the single desk will, for these and other reasons, be used in most schools.

2. **The Adjustable Desk and Chair are the Best.**—Others are not now permissible. The desks and chairs are adjusted to the pupil. The desk is just low enough to allow the bent elbow to touch it when the hand is raised to write without raising the shoulder or tilting the trunk. The chair is low enough to permit easy contact of the whole sole of the shoe with the floor when the pupils sit well back in the seat. A foot rest is always provided. The distance between the back of the chair and the edge of the desk should vary from nine to thirteen inches, according to size of pupils. Such adjustments foster hygienic positions, and should be made with great care. Inventors should study simplicity, so that teachers may be able to easily make the adjustments.

3. **The Desk Lid should be Adjustable for Study.**—Some inventive genius will give us a simple adjustable desk lid that on touching a spring will move to

the proper angle for a book rest. It must be easily adjustable to each pupil. The distance, the angle, and the light are such that the eye rests gratefully on the printed page. The text-book and the dictionary rest on the desk lid ready for use.

4. Reasonable Adjustment is of High Value.—The old education tried to fit the pupil to the seat and the desk ; the new education seeks to fit the seat and the desk to the pupil. Elaborate measurements and minute adjustments are not thought of. The adjustments recommended are easy, reasonable, and of great hygienic and educational value.

HYGIENIC HABITS.

Good Habits make for Manhood.—They mean health and happiness. Good habits lead to success. Teachers co-operate with parents in leading pupils to form good hygienic habits. Example, precept, and training are the effective means. Pupils come to reverence hygienic laws as they reverence moral laws. The habit of law-abiding is a great thing in education.

1. Regularity is a Fundamental Hygienic Habit.—Octogenarians ascribe their long lives largely to the habit of regularity. Regularity in eating, in sleeping, in taking exercise, in studying, in bathing, in recreation, tends to promote physical vigour and success. Regular work promotes physical and mental vigour, but irregularity tends to make invalids. Spurts often kill. We do a good thing for our pupils when we train them to the habit of regularity in attendance and study, but we do most for them when we lead them to form the habit of regularity in all things.

2. Cleanliness is a Humanizing Hygienic Habit.—

Savages are filthy. Soap and civilization are inseparable. Order may be the first, but assuredly cleanliness is Heaven's second law. Bathing is scarcely less necessary than food. Regular bathing, winter and summer, greatly increase physical vigour and mental power. A free use of water is the best of all preventives of disease. Filthiness characterizes swine and low people. Cleanliness and neatness characterize refined people. Teachers are models.

3. Sleep is Nature's Sweet Restorer.—Abundant sleep is a primary condition of health and study. Every act of mind or body tends to exhaustion. Sleeping and rest give the system time to repair the waste. He who rises each morning as strong as on the previous day maintains his vigour, and he who rises stronger, increases his vigour. The great students and great workers have ever been good sleepers. Hard study hurts no one. Dissipation and late hours and spurs kill. The teacher co-operates with parents in encouraging pupils to take regular and abundant sleep. They must grow as well as learn. To keep late hours is a deadly hygienic sin. Sleepiness in the schoolroom counts as stupidity. No pupil or student who takes abundant sleep is likely to break down from hard study.

4. Eating Habits are Important.—Hygienic food habits condition health and growth. Brutes live to eat, but men eat to live. What to eat, and how much to eat, and when to eat, and how to eat, are vital considerations. Plain living and high thinking go together. Half our pupils fail to do their best because

of bad eating habits. The teacher, by sensible suggestions, may greatly improve the eating habits of his pupils. Stories from life are often the best hygienic lessons.

5. Clothing Habits deserve Special Attention.—The principal hygienic use of clothing is to protect the body from heat and cold. Health, therefore, demands that we should consider the kind of clothing and the necessary changes of clothing. Upon these points the teacher will speak plainly and frequently. Boys as well as girls are injured for life by hurtful clothing habits. Happily, our clothing reforms are changing the worst clothing habits. But much work along this line will always devolve on the true teacher.

6. Cheerful Habits promote Health, Vigour, and Success.—Cheerfulness is the greatest of all hygienic agencies. Those who are always glad are seldom sick. Of all places, home and school should be made the most cheerful. A grim, cold, repulsive teacher chills the child to the bones. This grimness is not confined to male teachers; there are many lady teachers who long since forgot how to smile, at least how to smile in a sweet and loving manner. This is dreadful in a primary school. We have one in mind now. The lady is tall, pale, wears glasses, and never smiles, yet she is one of the noblest of women. Her pupils seem to have copied her. They look anxious and pale; wrinkles are on their young brows; life seems scarcely worth living. They become an easy prey to disease and death.—This is all wrong. Education comes from voluntary and glad effort. The teacher ought to be happy and glad. She ought to fill the

schoolroom with an atmosphere of love and a glow of cheerfulness. In such a school disease will be a stranger, and happiness and success will abound. Sunshine is the emblem of the best school life.

7. Habits of Law-abiding Self-control condition

Achievement.—The best work of a school is the development of such habits. Hurtful habits must not be formed, and if such habits have been formed they must be cured by the formation of helpful habits. The drink habit is destructive. The tobacco habit hurts, and does not help. Teachers can do most to save their pupils from these and other ruinous habits. The great thing is to develop the habit of law-abiding self-control. Unlawful indulgence of appetites and passions is beastly; lawful self-control is manly. All gratifications that hurt and do not help are unlawful. All good and all happiness comes through law-abiding. Health conditions happiness.

From the few *texts* here presented, teachers, it is hoped, will work out many practical lessons. Other topics of vast moment should be studied. First of all, to be efficient, each teacher must solve the personal hygienic equation. Then, we should gain such skill as will enable us to test sight and hearing and promote in every way the physical well-being of our pupils. So much depends on the proper treatment of pupils during the period of puberty that careful study is urged. The breaking up of bad hygienic habits by the formation of right habits is of the utmost importance. It is always wise to secure parental co-operation. Not much can be said in a brief chapter, but these suggestions may awaken and deep-

en interest. The literature of school hygiene is abundant, but teachers must work out these problems for themselves. Books are merely helps.

BETTER EDUCATIONAL CONDITIONS.

SUGGESTIONS, STUDY HINTS, AND TOPICS FOR DISCUSSION.

I. Higher Educational Ideals.—Illustrate what you mean by ideals and ideals. Give an example of how progress comes. What does the school do for the pupil? What is the test of school measures? What is the law of unity? Describe school evolution. Why do brutes and savages fail to make progress? Show how looking back hurts. Give examples of how better ideals promote progress. What lesson may we learn from the serpent? Give what you consider the chief value of high pupil ideals; teacher ideals; school ideals. Describe your ideal school; your ideal teacher.

II. Helpful Pupil Study.—What do you consider the chief value of pupil study? What does Dr. Butler say? Dr. Hall? Col. Parker? How does it help the teacher? Tell the story of child neglect. Give your plan for infant study; for child study; for boy and girl study. Why does the teacher need to study human life in all its stages? Why should the teacher profoundly study the pupil as a physical being; as a mental being; as a moral being? Why must the teacher know himself? Tell what Prof. Barnes says about methods of pupil study. Describe your method.

III. Teacher Improvement.—As an educator, what does the teacher do? Prove that teaching is a profession. Discuss tenure of office; salary; specialization; teaching as a career; teaching as a learned profession. Why must your ideal teacher be gifted; prepared; devoted; progressive? Why do all educational peoples establish and sustain schools for the professional education of teachers? Give the work of the department of education; of the chair of pedagogy; of the State normal school; of the city normal school; of the summer normal school. Prove that a teacher needs a professional education even more than the physician or the lawyer. Show that professional schools mean educational artists.

IV. Better School Hygiene.—What is school hygiene? Is its neglect criminal? Tell the story of school sanitation in other times. Give your plan for promoting home hygiene through the school. Show that play is both hygienic and educative. Why should elementary schools have a recess at the close of each school hour? Name some advantages of exercise in the open air; of systematic physical culture. Compare the plans for physical culture in England, Germany, France, and America. Give some advantages of good ventilation. Tell about the ventilation in most schoolrooms. Describe your plan. Describe the ideal heating of the schoolroom. How may rural schoolhouses best be heated? What is the normal temperature? Why should the light within correspond with the light without? How may teachers favor the eyes of their pupils? Show the relation between cleanliness and health. Give five reasons for schoolroom cleanliness. Tell about the civilized schoolhouse toilet. What is your plan for hygienic cloakrooms? Describe the hygienic school desk and seat. Tell something of the hygienic value of the habit of regularity; of cleanliness; of sound sleep; of proper diet; of suitable clothing; of law abiding. Why does school hygiene concern all men? What is the teacher's personal problem? What is meant by hygienic skill?

PART II.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIONAL FACILITIES.

CHAPTER V.—PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL ENVIRONMENTS.

VI.—PUPIL IMPROVEMENT THROUGH BETTER SCHOOL
APPLIANCES.

VII.—PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL
APPARATUS.

VIII.—PUPIL IMPROVEMENT THROUGH IDEAL SCHOOL
TEXT-BOOKS.

IX.—PUPIL IMPROVEMENT THROUGH SUITABLE SCHOOL
LIBRARIES.

PUPIL IMPROVEMENT THROUGH BETTER EDUCATIONAL FACILITIES.

V. EDUCATIVE ENVIRON- MENTS.	<ul style="list-style-type: none">1. Environments and moral growth.2. Environments and physical growth.3. Environments and mental growth.4. Environments and aesthetic growth.5. Commodious and educative school grounds.6. Educative schoolrooms.7. Ideal pupil environments.
VI. EDUCATIVE APPLIANCES.	<ul style="list-style-type: none">1. The schoolroom more than a workshop.2. Hygienic conditions of efficient work.3. Electric programme clock and facilities for movements.4. Physical comfort and effective work.5. The teacher's desk and dictionary holder.6. Revolving bookcase and working library.7. Working apparatus case and map and chart cases.8. Schoolroom facilities for educative work.
VII. HELPFUL APPARATUS.	<ul style="list-style-type: none">1. Educative value of schoolroom and school grounds.2. Value of blackboards and school furniture.3. Helps in the conduct studies.4. Helps in the language and literature studies.5. Helps in the science studies.6. Helps in the mathematics studies.7. Helps in the art studies.
VIII. IDEAL TEXT-BOOKS.	<ul style="list-style-type: none">1. Good text-books supplement oral instruction.2. Text-books open the treasures of human experience.3. An ideal text-book is original, brief, clear, tenable, artistic.4. Germany carries oral teaching to extremes.5. Proper use of the printed page the greatest of school arts.6. Free text-books supplied by the department libraries.
IX. SUITABLE SCHOOL LIBRARIES.	<ul style="list-style-type: none">1. Each schoolroom should have a working library.2. Each department—rural, primary, intermediate, high school—should have its department library.3. Each town and city and college should have its general library.4. The faculties of the several departments should manage their respective libraries.5. Each teacher should be an assistant librarian.

PART SECOND.

EDUCATIVE SCHOOL FACILITIES.

CHAPTER V.

PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL ENVIRONMENTS.

Environments condition Growth.—Surroundings influence the development of human beings as well as the growth of plants and animals. To some extent all men appreciate the educational effects of environments. Thoughtful parents make homes in healthy districts and in cultured communities. The improvement of our hygienic, æsthetic, and social environments engages the best energies of society. Brutes seek the most favourable environments for rearing their young instinctively, but man in an important sense creates his environments.

School Management is the Art of creating Educative School Environments.—Educators study profoundly pupil surroundings and spare no effort to secure the most favourable environments. A true teacher cre-

ates his ideal school location, his ideal school grounds, his ideal schoolhouse, and his ideal school appliances. These ideals are his working models, which he earnestly strives to realize.

FAVOURABLE LOCATION OF THE SCHOOL.

1. Environments favourable to Moral Growth the Highest Consideration.—To secure moral vigour with an environment of saloons, gambling dens, and dance houses, is more difficult than to secure physical vigour amid the deadly miasma of the swamp. It is also important that the surroundings should be friendly to culture and refinement. We plan to place our schools where the environments now seem most favourable, and we work constantly to make the surroundings more and more desirable. We should look well to locating our schools where the environments are most conducive to ethical culture. The teacher leads the community to unite in the constant endeavour to strengthen the moral influences surrounding the school.

2. Commodious School Grounds are an Educative Necessity.—Pupils have an inalienable right to enough of the earth's surface to make possible their healthy, vigorous, and happy growth. In cities the effort now is to secure the largest possible school grounds, almost regardless of cost. Villages and rural districts are now consecrating to pupil culture commodious school grounds. Our higher institutions everywhere demand large grounds.

3. Sanitary Considerations must have Great Weight in the Selection of School Grounds.—The nature of the soil, the drainage, remoteness from marshy grounds

and stagnant waters, the elevation and exposure, are some of the matters to be investigated. School grounds must first of all be healthy. In Ontario, of four thousand sites recently officially examined, only eighty were considered excellent sanitary school sites. Is this proportion the rule? When hygienic grounds are available, it is surely criminal to select unhealthy school grounds. Think of it: generations of pupils will be helped or hurt by the selection.

4. **Æsthetic Environments educate.**—School grounds should be object lessons of beauty, in order to foster refinement and make pupils happy. Natural beauty



The Country Schoolhouse.

should be considered in selecting school grounds, but grounds naturally unattractive may be made beautiful by art. Beautifying the school grounds is educative. The teacher leads and interests all the pupils in the work. Pupils are trained to help make the grounds beautiful and to help to keep them beautiful. The reflex influence on the homes is of great value.

The utter disregard of beauty in school environments was the rule in the near past. This is represented true to life in the sketch of a country schoolhouse. Such school surroundings, common even a quarter of a century ago, are fortunately now becoming comparatively rare. Teacher, contrast with this primitive scene some of the beautiful school grounds you have observed. Create your ideal school grounds and begin to work up to your ideal.

5. Environments should be Play-inviting.—All pupils must play as well as study. School grounds should be so well planned as to foster play. Besides the common playgrounds, there are decided advantages in having separate playgrounds for the sexes. Girls equally with the boys need regular invigorating exercise in the open air. Playgrounds should be supplied with such equipments for systematic exercises as tend to promote gracefulness and vigour.

6. School Grounds should be made Educative.—The geography plot represents divisions of land and water. The botanical plot represents plant growth. The arboretum represents kinds of trees. The small aquarium represents aquatic life. The school grounds are thus made to teach fundamental object lessons. All the environments are made educative. The schoolhouse, in its external appearance, teaches lessons in architecture.

EDUCATIVE SCHOOLHOUSES.

1. The Schoolhouse is Central in School Life.—The environments now literally shut in the child. The pupil spends his hours in the schoolroom and only his

minutes on the school grounds. The schoolroom with its contents deeply impresses the life of the child. No one knows how much these close and constant environments influence the lives of pupils. It is safe to do our utmost to make these environments the best possible.

2. The Evolution of the Schoolhouse is a Fascinating Story.—It is full of interest to teacher, pupil, and parent. School architecture fitly represents stages of educational progress. The schoolhouse with its environments may be taken as a symbol of the culture of a community. The old log house with its huge fireplace, its puncheon floor, its clapboard roof, its greased paper windows, and its backless slab seats stands for pioneer education. Marvellous has been

the transition from these rude structures to our beautiful rural schoolhouses and our attractive village school buildings and the educational places of our cities. Not the courthouse, not the city hall, not even the church is so attractive as the schoolhouse. Even the country schoolhouse is becoming a thing of beauty. But, as the immediate environment of our pupils, are our schoolhouses of to-day to be unconditionally com-



The Old Log Schoolhouse.

mended? Do they exert the best silent, unconscious influence for uplifting the pupils? How may we constantly increase the education value of our school-rooms?

3. The Teacher plans the Ideal Pupil Environments.

—You first create your ideal school and then go to work to realize it. The house is for the school, and not the school for the house. You build the school-house around your ideal school. Ours is the age of specialists. School architects now study to plan school buildings from the standpoint of the schools. The educator contributes the ideal school with its ideal environments; the architect literally erects the building around the school. He studies to secure at the least cost the best hygienic conditions, the best educational conditions, and, withal, the highest beauty. The teacher and school architect co-operate to actualize the ideal schoolhouse.

4. An Unfit School Building is a Monument of Folly.

—Most school buildings planned by common carpenters, or by common architects, or by school boards are such monuments. They are usually unsightly, uncomfortable, unhygienic, poorly located, poorly lighted, poorly ventilated, poorly heated, and poorly adapted to school work. Business school boards employ the very best educators and the very best school architects to plan and build their schoolhouses. Such buildings are monuments of wisdom, and are the fit environments of our precious pupils.

5. The School Home of the Young should be elevating.—All agree that the schoolroom should be a thing of beauty as well as utility. Tinted walls, classic pic-

tures, flowers, a singing bird, a lifelike cast or two, beautiful and fitting furniture, floods of light, delicious warmth, pure air, cleanliness, neatness, cheerfulness, make our pupils glad and awaken their activities. The teacher daily works such transformations as keep the schoolroom fresh and new. Such a schoolroom is indeed ideal, but in every land we now find real schoolrooms surpassing this ideal, but, alas! they are the exceptions. The average schoolroom is a cheerless thing. You have endured it, and you can transform it.

6. Better School Environments must come.—We are hopeful, for great advances have been made; but our school environments are still largely semibarbarian. The saloon and the school go on side by side. The environments of our fine horses are still vastly better than the environments of a majority of our pupils. Women as members of our school boards are quietly working beneficent changes. Art in our schools is silently transforming school environments, but the greatest of all influences is that of our earnest teachers.

CHAPTER VI.

PUPIL IMPROVEMENT THROUGH BETTER SCHOOL APPLIANCES.

The Schoolroom is a Miniature World. -It is infinitely more than a workshop, for here the young are led to prepare themselves for complete living. Here the pupils develop bodily vigour, mental power, and

moral worth. We have studied the schoolroom as a hygienic home and as a fitting environment for young immortals. We will now study the schoolroom as a place for educative school work. Progress comes through improved appliances. Even with crude implements the master workman can do great things, but with better instrumentalities he can accomplish vastly greater things.

We must secure the Best Hygienic Conditions.—Only thus can we make efficient school work possible. It is well to reiterate again and again these conditions. We study to secure perfect ventilation ; pupils have an inalienable right to breathe pure air. We study to secure perfect heating by keeping the temperature normal and uniform throughout the room. We study to secure perfect light by having the light in all parts of the schoolroom as nearly as possible uniform and as nearly as possible of the same intensity as the light outside. Such conditions are large factors in good school work, as they make pupil improvement possible.

We must provide Facilities for Movements.—We plan our school buildings to favour the quick and orderly movements of the pupils. Aisles, doors, halls, stairways, cloakrooms, are so planned as to facilitate speedy ingress and egress. We find some buildings so admirably planned that a thousand pupils are assembled or dismissed in from two to three minutes. In case of fire there is no panic. The hourly recess occasions no loss of time. Changes of classes are made quietly and quickly. The average schoolhouse must be reconstructed in view of pupil movements.

It impresses us more and more that the practical teacher must plan the schoolhouse in view of the school and the school work.

The Electric Programme Clock must signal Movements.* —We thus secure perfect regularity, and at the same time save all our energies for educative work. The clock assembles and dismisses the school and calls and dismisses classes. It signals any number of programmes and regulates an entire school of many departments. The programme clock is a beneficent device. The relief of teachers is very great, and it gives larger liberty to the pupils. Pupils soon learn orderly self-control. We find it safe to leave them free during all movements. After a time we may safely discontinue the line formations on the grounds. Pupils are trusted to assemble orderly and to conduct themselves worthily.

Pupils must be made comfortable.—That we may secure interest and attention and effective study, we must manage to secure physical comfort. This very largely is attained by suitable seats and desks. Some of us have watched with intense interest the evolution of the school desk. The transition from the backless slab seats and the barbarous slab desks of the old log schoolhouse to the adjustable desks and

* The author a third of a century ago devised an electric signalling apparatus which he used for ten years before it was improved and patented by a friend. So far as known, this was the first school in which movements were signalled by a clock. Great improvements have been made. Fred Frick, of Waynesborough, Pa., now supplies an excellent electric programme signalling apparatus.

chairs of our times is one of the signs of progress. Our study for decades was to adjust the pupils to crude and uncomfortable seats and desks—veritable instruments of torture. The adjustable single desk and adjustable chair mark an epoch in school life. We now adjust the desk and the seat to the pupil. Elsewhere the hygienic gain is discussed. Here we think of the educational advantages. Pupil energy is conserved. Interested attention and efficient study and good conduct are more easily secured. The desk is the pupil's workshop, laboratory, office, library, and studio; and he is trained to keep it in the best condition for work.

TEACHER'S SCHOOLROOM OUTFIT.

1. The Desk symbolizes the Teaching Profession.—Theology has its pulpit, law its bar, trade its counter, and teaching its desk. The story of the evolution of the teacher's desk deserves a place in literature. We associate the old schoolmaster with a rough table, always rickety. Since his day great improvements have been made, and the teacher's desk is now a thing of beauty and utility. The desk is the teacher's headquarters, and is the first thing considered in fitting up a schoolroom. Everything else is arranged in view of the teacher's desk.

2. The Dictionary Holder is important.—The open dictionary is so placed as to be conveniently used by teacher and pupils. The teacher must always be ready to devise helpful things. The common dictionary holder with a jointed arm instead of stand, attached to the teacher's desk, is an admirable device.

By a slight movement it is placed ready for use by teacher or pupils. At the present time Webster's International and The Standard are counted the best school dictionaries. A good dictionary, so placed as to invite constant use, is a schoolroom necessity.

3. The Revolving Bookcase for the Working Library helps.—Each teacher should have a working library. A revolving bookcase with one hundred suitable volumes is a schoolroom treasure. The revolving bookcase should be so placed that the teacher without rising may reach any volume in it. It should also be easy of access to the pupils. After considerable experimenting the plan here suggested is recommended. It seems to be the fitting device.

4. The Apparatus Case for the Working Apparatus should be convenient.—Its place seems to be against the wall, on the end of the teacher's platform. In this are kept the appliances most helpful in teaching. The case need not be large, as it is meant for the working apparatus. Each school must have its appropriate case. Some ingenuity is needed to construct these cases so as to secure beauty and utility. In schoolrooms thus arranged we find the apparatus is used many times where it is used once when placed in another room. Proximity counts for much in education as well as in love.

5. The Map and Chart Cases are placed above the Platform.—All are hung on spring rollers. The teacher studies to have these cases convenient and so placed that the maps and charts can best be seen by the pupils. Stupid teachers refuse to think and devise, and hence they make their work hard and themselves ridiculous.

It seems so easy, with our modern school devices, to arrange maps and charts for convenient use, that we are astonished to see such inexcusable neglect even in many otherwise good schools.

SCHOOLROOM FACILITIES FOR EDUCATIVE WORK.

We do well to study some devices from various standpoints. The blackboard easily stands first among our teaching facilities. In good teaching blackboards are used continually. It is certainly worth while to study the blackboard problem.

Pictures in the schoolroom are educative helps. When we visit our beautiful schoolrooms and feast our eyes on the artistic pictures, we never cease to regret the blank and dingy walls of the old schoolhouse of other days. Next to objects, pictures are most helpful in school work. Good pictures give delight as well as culture. Portraits of representative men and women aid in conduct studies and in literature. Pictures full of taste and story assist in art and language studies and history. In Nature studies appropriate pictures are also valuable. The ideal schoolroom, from the kindergarten to the university, is rich in helpful pictures.

The director of fine arts in Pratt Institute, Brooklyn, W. S. Perry, well says: "Art education has another field of work besides direct instruction in drawing; that is, the building, furnishing, and decorating of schoolhouses. This phase of the art educational movement ought also to be brought much more widely and forcibly to the attention of the public. School buildings, grounds, and furnishings should serve ar-

tistic as well as economic and hygienic ends. They should be constant object lessons in art for the inspiration of the children who are to shape the coming civilization. They can and should be made a positive, definite help in refining the manners, cultivating the imagination, and quickening the whole spiritual life. Co-operation in the work of improving school architecture and decoration should be solicited from the public, for whose good the schools themselves exist, but authoritative direction of the movement should be in the hands of experts in art and education."

CHAPTER VII.

PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL APPARATUS.

SCHOOL appliances embrace all school instrumentalities used in illustrating and explaining. Tools are not more important to the mechanic than school apparatus to the teacher. The good teacher is skilful in the use of apparatus, and suitable appliances almost double the efficiency of the teacher. We think of all helpful educative devices and materials as in a sense school appliances. We here use the expression in this broad meaning to include school grounds, school buildings, school furniture, school apparatus, and school laboratories, in so far as they are used as educational appliances.

1. School Grounds have Remarkable Educative Possibilities.—First of all, we so plan our school grounds as to promote physical culture, and we secure the best hygienic and play-provoking appliances. Next, we so develop our school grounds as to promote æsthetic culture. Winding walks, flowering shrubs, trees, birds, grass and flower plots, made and kept beautiful by the pupils, do much to cultivate taste. Then we fit up our school grounds to promote intellectual culture. Our mathematics grounds, our geography grounds, our biology grounds, all prepared by the pupils, are helpful. The school grounds have great educative possibilities, and inventive teachers study to render them of the utmost value by making them a miniature world.

2. The Schoolroom itself is the most Helpful of all Appliances.—It is so constructed and furnished as to promote physical and æsthetic culture. Teacher and pupils here find the means and facilities for illustrating form, direction, areas, and a thousand other things. Jesus drew most of his illustrations from the immediate environments and from the lives of the people. So will efficient teachers. We learn to look upon our schoolrooms, our school grounds, our neighbourhoods, and the home and school life of our pupils as our working educative laboratory.

3. The Blackboard is used in all Good Teaching.—The teacher's board can be seen by all the pupils. For convenience it is arranged in three sections, hung with weights so as to be raised or lowered by a touch of the hand. This device saves much labour. It is good economy to provide abundant blackboard sur-

face. The width and the height of the boards must depend upon the class of pupils. As to material, natural slate is the best and ultimately the cheapest. Liquid slating gives good satisfaction. Slated paper and slated cloth are often convenient. The board surface should be slightly tilted (about six inches) back from the perpendicular, so as to prevent the reflection of light from the windows striking the pupils' eyes. The wainscoting should extend up to the board. At the bottom of the board should be securely fastened a trough three inches wide and one inch deep, and this trough should be covered with wire gauze. This arrangement forms a dust trap, which secures a remarkable relief from crayon dust, and is probably the most satisfactory and convenient device now available. The skilful teacher will make large use of the blackboard with all grades of pupils. Fortunate the pupils whose teacher has his knowledge at the end of his crayon as well as at the end of his tongue!

4. Conduct Studies require Helpful Appliances.—Portraits of illustrious men and women take the first place. Each school may now have a few plaster busts of great personages. Good books take the highest rank. Historic charts and maps and the slated globe are essential helps in teaching history, the leading conduct study. In conduct lessons life is the laboratory, and the use of appliances is limited. Society; the knowing, feeling, doing self; history, and literature are the chief educative appliances in developing character.

5. Language-Literature Studies require Suitable Helps.—The kindergarten leads the little ones to live

language and literature. The plays and songs and stories and memory gems express the inner lives of the infants. All the environments and appliances are kindergarten helps in teaching language and literature. In the primary the best appliances are needed in training the children to speak and read and write our language and enjoy our child literature. Environments and all appliances and all the other studies are helps in this work. We need for the beginners pictures and reading charts, and suitable readers and supplementary readers. Dictionaries, encyclopaedias, and the language-literature libraries become the chief appliances as the pupils advance. Charts and maps and portraits are always helpful.

6. Science Studies call for Extended Facilities.—As no text-books are used in Nature studies in our elementary schools, we require abundant illustrative material and some apparatus. Each school should have small typical collections adapted to its locality. The teacher and the pupils will extend these collections, and each pupil will be led to make his own collections. Charts and pictures and microscopes are invaluable aids.

Geography must always rank as the central study in the elementary science group. In this study environments are the most helpful. A slated globe, a tellurian globe, relief maps, and outline maps are essentials. The pupils will model the geography grounds under the teacher's directions. Boards for map moulding can be made as needed. Suitable books of travel and adventure from the library assist greatly. Simple apparatus enables the teacher to give profitably easy lessons in physics and chemistry.

When our intermediate schools become specialized the science rooms will be fitted up for teaching the sciences. The teacher will be a specialist in science and will greatly extend and enrich the course. Most of our high schools have reached this stage of development, but our grammar schools still linger in the border land. The science teacher commands the necessary appliances and the pupils do more and more laboratory work. In most of our city high schools we now find biological, geological, physical, and chemical laboratories. Modern colleges and universities give great prominence to the laboratories and to laboratory methods.

7. Mathematical Studies call for the Best Aids.—Through a knowledge of things in space and time the pupil comes to get a knowledge of form and number. Form and number must be taught the children concretely. Every step must first be taken objectively. Geometrical forms, bundles of sticks, the numeral frame, weights and measures, are the most helpful. No elementary school should be without a set of the metric as well as the common weights and measures. Since ten is the base of our system of notations, the metric weights and measures can be used with great advantage. The metric system may be taught side by side with our common system, and thus the way may be prepared for its universal use. The aim in concrete geometry and in elementary arithmetic is to find out rather than to prove, and hence the work is objective and practical. Simple instruments for measurement are of great value. In the high school the outfit for teaching and learning mathematics is extended to suit the work.

8. Art Studies require Good Facilities.—Most schools now have music charts and writing charts. All should have materials and models for teaching drawing. We can afford to be liberal in supplying our school grounds and school gymnasiums and schoolrooms with appliances for physical culture. For manual training we must at first be content with meagre outfits. As the work goes on and as the interest increases we can readily secure the necessary facilities.

Practical Suggestions.—Teachers and school boards do well to consider carefully the problems of school apparatus.

1. Purchase only from reliable dealers. Thus you will guard against frauds and secure the best articles on reasonable terms.

2. Purchase apparatus as needed. This will prevent cumbering your schools with useless appliances. The schoolroom is no place for rubbish.

3. Secure some helps for each of the five study groups. To exhaust the funds for science apparatus is a serious educational blunder. Each study has its claims. Conduct lessons demand portraits, maps, charts, books. Primary reading demands objects, pictures, charts, books. Geography demands geography grounds, geography boards, geography cards, globes, maps, books. Arithmetic demands objects, numeral frame, weights, measures. Art demands tools, pictures, models. But it is needless to specify. Invention is giving us unlimited helps. The competent teacher will select the most helpful apparatus for each study.

4. Make some of your apparatus. Many of the

most helpful appliances are often those things made by the teacher and the pupils. As manual training advances this becomes easy.

CHAPTER VIII.

PUPIL IMPROVEMENT THROUGH IDEAL SCHOOL TEXT-BOOKS.

Books are our Best Helps.—Treasured knowledge is found in books. He who has mastered the secrets of gaining knowledge from books may be considered independent of the living teacher—fit to graduate. To develop this power is the work of the school. By a school text-book is meant a book that forms the basis of regular class work. We have text-books for teachers, but ordinarily we think of text-books as books used by pupils in connection with the instruction given by the teacher. Good text-books, next to the living teacher, are the best school helps; and the student is far more dependent on his books for information than upon his teachers.

Text-Books open the Treasures of Human Experience.—“One great object of the school in our time is to teach the pupil how to use books—how to get out for himself what there is for him in the printed page. The man who can not use books in our day has not learned the lesson of self-help, and the wisdom of the race is not likely to become his. He will not find, in this busy age, people who can afford to stop and tell

him by oral instruction what he ought to be able to find out for himself by the use of the library.

"Oral instruction, except as an auxiliary to the text-book—except as an incitement to the pupil's interest and a guide to his self-activity and independent investigation in the preparation of his next lesson—is a great waste of the teacher's energy and an injury to the pupil. The pupil acquires a habit of expecting to be amused rather than a habit of work and a relish for independent investigation. The most important investigation that man ever learns to conduct is the habit of learning by industrious reading what his fellow-men have seen and thought. Secondary to this is the originality that adds something new to the stock of ideas and experiences of the race. The pupil who has not yet learned what the human race has found to be reasonable, is not likely to add anything positive to the sum total of human knowledge, although he will certainly be likely to increase the negative knowledge by adding a new example of folly and failure.

"The first thing in education, therefore, is the acquirement of the experience of the world, in order that the pupil may not start anew at the bottom of the hill, but may begin with the results of the work of his race."—[W. T. HARRIS.]

IDEAL TEXT-BOOKS.

1. **Original.**—An ideal text-book is a creation of genius. We think of genius as ability to see into things. The author of a true text-book gains insight into pupil nature and into his subject, and so is able

to create a text-book which unfolds the subject to the pupil. A real text-book is as truly a creation as a play of Shakespeare. It furnishes materials and ideals for generations of compilers. Such text-books do not come at the bidding of publishers. Like the classics, they are original in plan and expression, but embody the wisdom of the race. The author of a true text-book deserves to be crowned side by side with the poet.

2. **Brief.**—An ideal text-book presents the essential things. It is a text-book, not an encyclopedia. It gives in good form the results of human experience and thought. Principles are concisely presented, clearly illustrated, and aptly applied. The teacher interprets the text-book. Oral instruction and the school library supplement the text-book. Though not large, the true text-book presents the results of human learning. A synopsis is not a text book, nor is the ponderous volume rich in details; the one starves the pupil while the other confuses and discourages him. The golden mean characterizes the ideal text-book.

3. **Clear.**—An ideal text-book presents the subject with sunlight clearness. The child understands Jesus. Boys and girls understand Dickens. All men appreciate the world classics, for the golden truths outshine the silver settings. The true text-book holds the attention to the thought; no energy is wasted puzzling over the meaning of obscure and difficult expressions. Our best text-books for school and college, like the lessons of the Great Teacher, are marvels of clearness.

4. **Teachable.**—An ideal text-book fosters good study and good teaching. Each paragraph is suggestive as well as expressive, and becomes a topic for study. The pupil is led to apperceive, for the new thought is approached and mastered in the light of previous acquisitions. One book is a delight and an inspiration to pupils and teacher, while another book of great merit is a disappointment and a discouragement. Whence this difference? Perhaps we can not express it, but we find on trial this difference. A teacher gives up a strong book; why? Because with it she could not get the best study or the best class work. The book was not teachable. Before printing, some authors send advanced sheets of the lessons to a hundred good teachers, requesting them to use with their classes and return with their suggestions. If all would-be authors should pursue this plan, two thirds of their books would never be printed, but those printed would be treasures.

5. **Artistic.**—An ideal text-book is a work of art. Ours is the age of admirable text-books. Publishers are giving us books artistic in thought and in language and mechanically excellent. The binding is artistic and enduring. The type is large and clear and the illustrations are choice. The beautiful open page has always a smile for the pupil. It is taken by common consent that nothing is too good for the child. As we come to know child needs better, many artistic improvements in our text-books will doubtless be suggested, and it will become one of the highest pleasures of the teacher to put into the hands of pupils the *best* text-books. How are you to know

such books? Just as you come to know good literature—by tasting and testing.

THE TEXT-BOOK AND ORAL TEACHING.

Real Teaching is Oral.—The teacher leads the pupil to find out from Nature and from books. In our times we magnify experimental methods and Nature study. It is well. But in all reforms there is the danger of going to extremes. In the reaction against the slavish, senseless book grinding of the old school-master, we have drifted into a shoreless sea of exclusive oral instruction. It is not well. Book study must go on side by side with Nature study. The text-book must always occupy an important place in school work.

Germany has carried Oral Teaching to Extremes.—“Few text-books are used in the elementary schools of Germany—fewer, I believe, than is good for the pupils—first, because a knowledge of the use of books and a good habit of using them are most valuable to people of any walk in life; and, secondly, because a proper use of them prevents too great dependence upon the teacher. The programmes of graded schools are so arranged as to prevent pupils from studying independently and without interruption in school; and the constant talking of teachers, however stimulating it may be to pupils, is not without its bad effects.”—[John F. Prince, *Methods in German Schools.*]

The Proper Use of the Printed Page is the Greatest of all Arts taught in the School.—“Every one will admit that what is called the ‘slavish use’ of text-books is a great evil. The memorizing of words and sen-

tences without criticism and reflection on their meaning is a mechanical training of the mind and fit only for parrots ; but, on the other hand, the proper use of the printed page is the greatest of all arts taught in the school. How to get out of printed words and sentences the original thought and observation recorded there—how to verify these and critically go over the steps of the author's mind—this is the method of discovery and leads to the only real progress ; for real progress comes from availing oneself of the wisdom of the race and using it as an instrument of new discovery. That other method sometimes commended, of original investigation without aid from books, forgets that mankind have toiled for long thousands of years to construct a ladder of achievement, and that civilization is on the highest round of this ladder. It has invented school education in order that its youth may climb quickly to the top on the rounds which have been added one by one slowly in the lapse of ages. The youth shall profit vicariously by the thought and experience of those who have gone before. For the child of the savage tribe there is no such vicarious thinking and living ; he begins practically at the bottom of this ladder, and with no rounds on which he may climb.”—[W. T. HARRIS, Address on Horace Mann.]

FREE TEXT-BOOKS.

This seems to be the solution of the book question. It is believed that the time is not distant when all our States will adopt the plan of furnishing free text-books now working so well in several States. Each

State will work out the details in its own way. But more and more the vital management will be left to the teachers, and we count as teachers all school superintendents and educated librarians. When we create rural, primary, intermediate, and high-school department libraries, and place these libraries under the management of their respective faculties, it will be easy to have the text-books supplied through these libraries and these several school faculties. No one will question the fitness of this method. The teachers who use the text-books are surely the ones who should select the books. Many advantages not now dreamed of will certainly follow.

CHAPTER IX.

PUPIL IMPROVEMENT THROUGH SUITABLE SCHOOL LIBRARIES.

Books educate.—Carlyle has said “that the true university of these days is a collection of books.” It is an education to know how to read and what to read. The school does its best work when it develops a taste for the best literature and fosters the reading habit. Men of action as well as men of thought get their inspiration from books. A choice school library wisely used doubles the efficiency of the school. The school library as now conceived includes a working library for each schoolroom, a department library

for each department, and a general library for each city.

SCHOOL LIBRARIES.	1. The working libraries.	1. Rural. 2. Primary. 3. Intermediate. 4. High school. 5. College.
	2. The department libraries.	1. Rural. 2. Primary. 3. Intermediate. 4. High school. 5. College.
	3. The general library.	1. Rural. 2. Primary. 3. Intermediate. 4. High school. 5. College.

We plan to make school libraries accessible, suitable, choice. As made and managed in other days, the library was practically out of the reach of teachers and pupils. The world is now working to put select libraries into the schools, to be managed by the teachers. The twentieth century seems destined to be the school-library age of the world. The coming teachers are studying how to create and how to manage and how to use ideal school libraries, just as they are studying how to control wisely and teach efficiently. Nothing in art is final. Our crude beginnings must give place to better things. The partial failures of most school-library schemes stimulate us to devise better things. In faith and hope this suggestive scheme is submitted to the brotherhood of teachers. Brethren, the work is intrusted to you. Horace Mann, in 1840, made an earnest plea for the school library: "The idea is modern. In 1835 the State of New York initiated the movement to place a library in each school. I look upon the effort to place within the reach of young and old the best and most suitable books as one of the grandest moral en-

terprises of the age. It will extend to all the inestimable privileges heretofore enjoyed by the few." New York seems to have led in the school-library movement, as it has in other great forward educational movements.

THE WORKING LIBRARIES.

Each schoolroom, in schools above the kindergarten, should have a working library. For our elementary schools, the ideal working library contains about one hundred volumes, kept in a pretty revolving bookcase. The books are selected to supplement the teaching, and the pupils feel as free to use the books as to breathe the air. They come to think of the library as theirs, and they are led to feel a wholesome respect for the books. "Our library must be handled with care, and must be kept clean and beautiful," is the sentiment of the school. The teacher never wearyes in teaching the pupils how to read and what to read. No effort is spared to develop the reading habit and to cultivate an appreciation of good books. The pupils are not encouraged to read many books, but to read appreciatively the best books for them.

1. The Working Rural School Library should be Fostered.—We find, as a rule, few suitable books for the young in the average rural home. Then, in the country, culture must necessarily come very largely through the school and through books. Access to a hundred choice books means a new world to the country pupil. Nearly all libraries are still urban; we earnestly plead for a working library in every country school.

house. Ten dollars invested in a rural school library will do more good than a hundred dollars invested in an urban school library. "If I had a million dollars to invest where it would do most good," said a great philanthropist, "I would put it all into rural school libraries."

2. Primary Working Libraries enrich.—Millions of our pupils do not even reach our grammar schools, and, besides, the reading habit is easiest formed during the primary years. We are now rich in books suitable for children. To get our primary pupils into the habit of reading appreciatively choice books is a great work. This is purifying and enriching the stream of humanity at the fountain. One hundred suitable books for the children in each primary schoolroom would prove an incalculable blessing.

3. Intermediate Working Libraries elevate.—In the specialized intermediate there will be five special libraries in addition to the department library: conduct, literature, science, mathematics, art. Each teacher will form a special library to re-enforce his special work. In our unspecialized grammar schools each working library must include books for all the subjects, and books must be selected to suit the grade. These libraries will afford congenial and profitable occupation for restless boys and girls, and pupils will be trained to find out from books. The text-book in geography is supplemented by suitable books of exploration and travel, and by the stories of the States and nations. So in all the studies. Each study is enriched by the library.

4. High-school Working Libraries are invaluable.—The pupil is now a student, and is capable of great things. Probably at no other period of life do choice books count for so much. The youth learns to use wisely the general library, but still needs the help of the teacher. One book in the teacher's working library counts for more than a hundred in the general library. Pupils are led to read at least one excellent book in connection with each study in addition to general reading. Each high-school teacher is a specialist in a group of studies, and his working library is a special library.

DEPARTMENT LIBRARIES.

The Isolated Teacher belongs to the Past.—Everywhere teachers are learning to work in groups. The law of unity requires this. A group of teachers working as a unit constitute a *faculty*. The primary principal and her assistants constitute a primary faculty; the intermediate principal and the assistants constitute an intermediate faculty; the principal of the high school and the assistants constitute a high-school faculty. We are now learning to group our rural schools, making the teacher of the central school principal, and the teachers of the several schools in the group assistants. The teachers of a group of rural schools work as a unit, and we are coming to think of the district principal and his assistants as a rural school faculty. We are getting to understand the law of unity, and it is surely revolutionizing our school work.

One function of the department libraries will doubtless be to furnish *free text-books*. As the prin-

cipal is librarian and the assistant teachers assistant librarians, the management of text-books will be admirably provided for. Many States now supply text-books to the pupils free, and the time is not distant, it is believed, when all the States will adopt this plan.

1. The Rural School Department Library is most important.—More than half of all our pupils are in our country schools. Think of the beneficent work of getting into the hands, and heads, and hearts of these starving millions the world's best literature! It is not easy to exaggerate the importance of this movement, "the grandest moral enterprise of the age." What greater work can the millionaire do than to endow the rural school libraries of his native State? This library, as we now think of it, is kept in the library room of the central school building of the rural school group, and the principal is librarian. Each of the assistant teachers is an assistant librarian, and books are returned and taken out at the semi-monthly meetings. The faculty, with the best available helps, and under the general directions of the county and State superintendents, plan, build up, and manage the library. Each teacher gives an annual entertainment for the benefit of the library, and the State and the district contribute annually limited amounts. Donations are always in money. The working library of each school is furnished from the district library, and is kept fresh.

The rural school library must meet the wants of all, and must be made easily accessible to old and young. In selecting books, we first think of our pupils, and then of the people, and then of ourselves as

professional teachers. We study to get the best helps for all.

2. The Primary Department Library is of Great Value.—Here, too, the principal is librarian and the assistant teachers are assistant librarians. The working libraries are supplied from the department library, and the department libraries are supplied from the general library. The primary faculty, under the direction of the superintendent and the general librarian, plan, build up, and manage the primary library. They study to procure the most helpful books, first for the children and then for themselves. There is no machine work, and no two libraries will ever be the same. The faculty study, discuss, select, and thus the library is always unique, is always growing. It is completely adapted to childhood and primary work, for the teachers make and manage it.

3. The Intermediate Department Library.—Until the pupils reach the high school their reading should, as far as practicable, be directed by the teachers. The intermediate principal is librarian, and the assistant teachers are assistant librarians. The intermediate faculty create a unique intermediate library and manage it. Books are secured through the general library, and from this library the intermediate working libraries get their supplies. The intermediate teachers work as a unit. At their weekly meetings we must find remarkable interest in library measures. It is safe as well as wise to leave the intermediate faculty to plan and manage the intermediate library. Superintendents and general librarians do well to limit themselves to suggestions.

4. **High School, Normal School, and College Department Libraries stand Side by Side with the Laboratories.**—Research and investigation go on together. Experts are interested in details, but the educator studies to get the libraries close to the students. Each group of studies now has its department library and each professor has his special working library. This plan, it is claimed, increases a hundredfold the value of the general library. Those who have closely observed its workings for decades so testify. General school and college libraries do their most effective work in supplying the department libraries.

GENERAL SCHOOL AND COLLEGE LIBRARIES.

Our mainmoth public-school and college libraries are our pride and delight, but are they doing all they are capable of doing? The Bank of Scotland through its branches extends its privileges to all the people of Scotland. May not our great libraries, in a similar way, vastly extend their usefulness? The editor of the Library Journal says: "The trend of opinion and experience points toward the branch school library as the best solution of the library problem. Those libraries that have tried the method are unanimous in its favour. Now, at best, our great libraries do not reach a large percentage of our pupils, but when they learn to enlist all teachers as active assistant librarians, then their beneficence will be extended to every pupil."

The library department of the National Educational Association, the professional librarians who are so admirably managing our great libraries, and our

various library associations, give promise of great usefulness in the future. At present all plans for library extension must be tentative, but we shall build on the rock when we learn to intrust to our teachers the management of our working and our department school libraries. The general library will thus come into direct touch with all the teachers and all the pupils, and will supplement in the most helpful ways all other agencies.

Our general libraries should be managed by professional librarians in thorough sympathy with the schools. In the near future only graduates of schools for librarians will be given charge of our libraries. Such librarians will organize and train the teachers for assistant librarians, and will thus extend the blessings of the library to every home.

EDUCATIVE SCHOOL FACILITIES.

SUGGESTIONS, STUDY HINTS, AND TOPICS FOR DISCUSSION.

V. Pupil Environments.—Show the relations of environment to growth. Why is the school site so important? Describe desirable and undesirable hygienic environments; aesthetic environments; culture environments; moral environments. Sketch your ideal school grounds; *your* ideal schoolroom. Why should school grounds be play-inviting? Point out the relations of play and work. What may the teacher do to improve pupil environments?

VI. School Appliances.—Show that the schoolroom is much more than a workshop. Is the school a miniature world? Give *your* plan for securing good hygienic conditions for effective school work. Tell how you would have a schoolhouse constructed and furnished so as to facilitate movements. Describe the automatic movements of a school signalled by an electric programme clock. What are the gains? How does physical comfort help? Picture the evolutions of school seats and desks; the teacher's desk. How will *you* fix *your* dictionary holder? Describe *your* working-li-

brary case; *your* arrangements for maps, charts, pictures. Give some reasons for the use of the blackboard. How will *you* abolish the dust nuisance? Tell some of the benefits of pictures in the schoolroom.

VII. School Apparatus.—Tell what you mean by *educative* apparatus. Describe your educative school grounds; your educative schoolroom; *your* ideal blackboard. How may the teacher's blackboard be best arranged? What do you consider the most desirable helps in conduct teaching? in language-literature teaching? in science teaching? in mathematics teaching? in art teaching? Give some of the advantages in having teacher and pupils make a part of the apparatus; make their own collections. Suggest ways of securing and preserving apparatus.

VIII. School Text-Books.—What is meant by a text-book? a reference-book? Give your reasons for exalting the art of gaining knowledge from books. Why should a text-book be original? brief? clear? teachable? artistic? Tell the story of the oral-teaching movement. Give your reasons for thinking that the Germans make a mistake in ignoring text-books. Outline Dr. Harris's reasons for emphasizing the proper use of the printed page. Give your arguments for and against free text-books. What plan of adopting and supplying text-books do you count best? Is it safe to intrust this work to the teachers?

IX. School Libraries.—Give Carlyle's definition of a modern university. How may school libraries be made to reach all pupils? Is it well to make each teacher an assistant librarian? What State initiated the school-library movement? When? Tell what Horace Mann said in 1840. Present seven reasons why each schoolroom should have a working library. Describe the ideal rural school working library: primary; intermediate; high-school. Give reasons for a department library for each department of our school work. Why should the department faculty manage the department library? Describe the ideal rural school department library: primary school; intermediate school; high school. What must become the most beneficent function of the general library? Illustrate by the Bank of Scotland. Should our general libraries be managed by professional librarians educated and trained for this special work? What can teachers do to advance the school-library movement?

PART III.

PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL GOVERNMENT.

CHAPTER X.—PUPIL IMPROVEMENT THROUGH EDUCATIVE GOVERNING POWER.

XI.—PUPIL IMPROVEMENT THROUGH EDUCATIVE MOTIVES.

XII.—PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL REGULATIONS.

XIII.—PUPIL IMPROVEMENT THROUGH EDUCATIVE LAW-ABIDING.

XIV.—PUPIL IMPROVEMENT THROUGH EDUCATIVE PUNISHMENTS.

<p>X. EDUCATIVE GOVERNING POWER.</p>	<ol style="list-style-type: none"> 1. <i>Character</i>.—The teacher the conduct model. 2. <i>Culture</i>.—The teacher the ideal. 3. <i>Insight</i>.—The teacher the wise guide. 4. <i>Teaching Power</i>—The teacher an artist. 5. <i>Will Power</i>.—The teacher a leader. 6. <i>Heart Power</i>.—The teacher a helpful friend. 7. <i>System</i>.—The teacher an organizer. 8. <i>Tact</i>.—The teacher a manager. 9. <i>Bearing</i>.—The teacher a governor. 																																
<p>XI. EDUCATIVE MOTIVES.</p>	<ol style="list-style-type: none"> 1. Through high incentives we lead. 2. <i>Highest Motives</i>.—Duty, truth, beauty. 3. <i>Altruistic Motives</i>.—Social betterment. 4. <i>Egoistic Motives</i>.—Self-betterment. 5. <i>Low Motives</i>.—Fear, rivalry, marks, prizes. 6. <i>Debasement Motives</i>.—Selfishness, malevolence. 																																
<p>XII. EDUCATIVE SCHOOL REGULATIONS.</p>	<ol style="list-style-type: none"> 1. A school an embryo state. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Educative.</td><td>1. Positive.</td></tr><tr><td>2. General.</td><td>2. Practical.</td></tr><tr><td>3. Popular.</td><td></td></tr></table> 2. School regulations must be <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Law of quietness.</td><td>1. Law of regularity.</td></tr><tr><td>2. Law of regularity.</td><td>2. Law of promptness.</td></tr><tr><td>3. General.</td><td>3. Law of propriety.</td></tr><tr><td>4. Practical.</td><td>4. Law of duty.</td></tr></table> 3. The school makes the laws. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Law of quietness.</td><td>1. Law of regularity.</td></tr><tr><td>2. Law of regularity.</td><td>2. Law of promptness.</td></tr><tr><td>3. General.</td><td>3. Law of propriety.</td></tr><tr><td>4. Practical.</td><td>4. Law of duty.</td></tr></table> 4. School code. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Law of quietness.</td><td>1. Law of regularity.</td></tr><tr><td>2. Law of regularity.</td><td>2. Law of promptness.</td></tr><tr><td>3. General.</td><td>3. Law of propriety.</td></tr><tr><td>4. Practical.</td><td>4. Law of duty.</td></tr></table> 5. Adopting code. 	1. Educative.	1. Positive.	2. General.	2. Practical.	3. Popular.		1. Law of quietness.	1. Law of regularity.	2. Law of regularity.	2. Law of promptness.	3. General.	3. Law of propriety.	4. Practical.	4. Law of duty.	1. Law of quietness.	1. Law of regularity.	2. Law of regularity.	2. Law of promptness.	3. General.	3. Law of propriety.	4. Practical.	4. Law of duty.	1. Law of quietness.	1. Law of regularity.	2. Law of regularity.	2. Law of promptness.	3. General.	3. Law of propriety.	4. Practical.	4. Law of duty.		
1. Educative.	1. Positive.																																
2. General.	2. Practical.																																
3. Popular.																																	
1. Law of quietness.	1. Law of regularity.																																
2. Law of regularity.	2. Law of promptness.																																
3. General.	3. Law of propriety.																																
4. Practical.	4. Law of duty.																																
1. Law of quietness.	1. Law of regularity.																																
2. Law of regularity.	2. Law of promptness.																																
3. General.	3. Law of propriety.																																
4. Practical.	4. Law of duty.																																
1. Law of quietness.	1. Law of regularity.																																
2. Law of regularity.	2. Law of promptness.																																
3. General.	3. Law of propriety.																																
4. Practical.	4. Law of duty.																																
<p>XIII. EDUCATIVE LAW-ABIDING.</p>	<ol style="list-style-type: none"> 1. Govern up to law-abiding self-control. 2. Educate the pupil to work quietly. 3. Educate to habits of regularity. 4. Educate to habits of promptitude. 5. Educate pupils to act with propriety. 6. Educate pupils to do right. 7. Conditions, example, teaching, training. 																																
<p>XIV. EDUCATIVE PUNISHMENTS.</p>	<ol style="list-style-type: none"> 1. Punishment is remedial and works law-abiding. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Educative.</td><td>1. Natural.</td></tr><tr><td>2. Natural.</td><td>2. Reformatory.</td></tr><tr><td>3. Reformatory.</td><td>3. Just.</td></tr><tr><td>4. Just.</td><td>4. Mild and rare.</td></tr></table> 2. School punishment must be <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Disapproval.</td><td>1. Corporal.</td></tr><tr><td>2. Reproof.</td><td>2. Fear.</td></tr><tr><td>3. Deprivations.</td><td>3. Degrading.</td></tr><tr><td>4. Suspension.</td><td>4. Marking.</td></tr></table> 3. Educative punishments. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Disapproval.</td><td>1. Corporal.</td></tr><tr><td>2. Reproof.</td><td>2. Fear.</td></tr><tr><td>3. Deprivations.</td><td>3. Degrading.</td></tr><tr><td>4. Suspension.</td><td>4. Marking.</td></tr></table> 4. Hurtful school punishments. <table border="0" style="display: inline-table; vertical-align: middle;"><tr><td>1. Disapproval.</td><td>1. Corporal.</td></tr><tr><td>2. Reproof.</td><td>2. Fear.</td></tr><tr><td>3. Deprivations.</td><td>3. Degrading.</td></tr><tr><td>4. Suspension.</td><td>4. Marking.</td></tr></table> 5. Punishments must be rational. 	1. Educative.	1. Natural.	2. Natural.	2. Reformatory.	3. Reformatory.	3. Just.	4. Just.	4. Mild and rare.	1. Disapproval.	1. Corporal.	2. Reproof.	2. Fear.	3. Deprivations.	3. Degrading.	4. Suspension.	4. Marking.	1. Disapproval.	1. Corporal.	2. Reproof.	2. Fear.	3. Deprivations.	3. Degrading.	4. Suspension.	4. Marking.	1. Disapproval.	1. Corporal.	2. Reproof.	2. Fear.	3. Deprivations.	3. Degrading.	4. Suspension.	4. Marking.
1. Educative.	1. Natural.																																
2. Natural.	2. Reformatory.																																
3. Reformatory.	3. Just.																																
4. Just.	4. Mild and rare.																																
1. Disapproval.	1. Corporal.																																
2. Reproof.	2. Fear.																																
3. Deprivations.	3. Degrading.																																
4. Suspension.	4. Marking.																																
1. Disapproval.	1. Corporal.																																
2. Reproof.	2. Fear.																																
3. Deprivations.	3. Degrading.																																
4. Suspension.	4. Marking.																																
1. Disapproval.	1. Corporal.																																
2. Reproof.	2. Fear.																																
3. Deprivations.	3. Degrading.																																
4. Suspension.	4. Marking.																																

PART THIRD.

PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL GOVERNMENT.

CHAPTER X.

PUPIL IMPROVEMENT THROUGH EDUCATIVE GOVERNING POWER.

The purpose of the school is educative, and the teacher is pre-eminently the educator. Appliances are important, but the teacher is the vital agency. All good comes through lawful self-effort, but it is the teacher who manages to secure educative effort. Governing power is the Divine commission for leadership, and is the proof that the teacher is called and sent. The teacher thus commissioned, through enabling motives, leads his pupils up to self-control, self-government, and self-efficiency. Teaching is the art of promoting pupil growth—physical, mental, moral—and we think of the teacher as having the capability to lead his pupils to make the most of themselves. He somehow manages to get his pupils into habits of doing what is right and best. When one goes wrong, he manages to get him to retrace his steps. The

power to thus manage is termed educative governing power. Most persons who really desire to be teachers are gifted with governing ability, but this power may be incalculably increased by culture. The orator, the musician, the poet, and the educator are such because they have improved their natural gifts. Teacher, this is a personal lesson. In view of human experience, you ask, "What are the elements of educative governing power?" and "How may I put on the whole armour of educative leadership?"

1. **Character.**—Be what you would have your pupils become. Moral character is the first element of educative governing power. No bad person can govern well. Moral character—purity of heart and life—is the basis of true educative leadership.

Jesus lived the one perfect life, and so is the fit leader of men. As you approach the perfect life you become fit to lead your pupils up to a higher and better life. Moral character is the most potent of all forces. We despise and distrust a base, weak, mean man; but we trust and almost worship a pure, strong, true man. The vile teacher, however brilliant, debases his pupils and fosters anarchy. The pure, strong teacher is a living object lesson, and a fit leader of pupils. Such a teacher, above all, will foster the moral virtues and promote the growth of moral character. Conduct and not scholarship is the pre-eminent thing in education. It is easy for a worthy teacher to govern well, for his pupils trust him, love him, reverence him. Moral worth is the *uplifting* factor in teacher governing power.

ELEMENTS OF TEACHER GOVERNING POWER.	IX. BEARING.	Assert leadership by your bearing.
	VIII. TACT.	Manage to utilize all educative agencies.
	VII. SYSTEM.	Secure good order and efficient work through system.
	VI. WILL POWER.	Control through high motives and good habits.
	V. HEART POWER.	Be the pupil's sympathizing friend and helper.
	IV. TEACHING POWER.	Lead pupils to do the best work in the best ways.
	III. PUPIL INSIGHT.	Study pupil nature that you may promote pupil growth.
	II. CULTURE.	Cherish the spirit of mastery and broad culture.
	I. CHARACTER.	Be what you wish your pupils to become.

2. **Culture.**—Master the subjects you teach, and seek broad culture. Culture is the second element of educative governing power. All the world follow the man who knows. Broad culture commands. Educational leaders must be cultured men and women. Aristotle and Thomas Arnold, the peerless teachers, were also peerless students. Only earnest learners are fit to lead learners. It is said that Agassiz never needed to ask for attention; he knew, and commanded attention through interest. After half a century of highly successful work a teacher was asked the secret of her success. "Thorough preparation," was her modest answer. Many teachers, some say a majority, never investigate, never think, never study, never prepare the lessons. Surely such persons are unfit to lead their pupils to mastery. They are not learners, and hence are not in touch with learners. They can not govern well because they can not create and sustain interest. Only ear-

nest students can be educational leaders. It is easy for the cultured teacher to govern well, for culture commands respect and confidence. Culture is the *commanding* factor in teacher governing power.

3. Pupil Insight.—Study pupil nature that you may promote pupil growth. Pupil insight is the third element of educative governing power. The world's great leaders have been profound students of human nature. They knew men as well as affairs. The educator must know his pupils. You study the physical economy that you may command hygienic conditions and promote physical vigour. You study the mental economy that you may adapt the work to each pupil and promote harmonious mental growth. You study the moral economy that you may foster character growth. You work in the light, and command everything that helps and reject everything that hurts. You provide the best work for each and all; you manage to have each pupil do educative work. Not understanding his pupils, the old schoolmaster groped his way in the dark and ruled through the rod. Many modern schoolkeepers know not their pupils, and hence govern through low incentives. It is easy for one who knows his pupils to govern well, for he understands their ways and wants. Pupil insight is the *guiding* factor in teacher governing power.

4. Teaching Power.—Lead your pupils to do the best work in the best ways. Teaching power is the fourth element of educative governing power. You, in some degree, have mastered the educative art. You laid a solid foundation in the rock of self-study

and pupil study. From the standpoint of the educator you have studied the history and science of education. You have lingered at the feet of the masters, and learned the art of teaching from Jesus, from Plato, from Froebel. You have read some of the best things and have felt the spell of some of the best living teachers. You have gained some skill in the divine art of teaching. Realizing the preciousness of each moment, you so plan that your pupils do only the best work and only in the best ways. You manage to keep yourself and your pupils so interested and so busy that there is no time or occasion for discipline or marking. Good teaching insures easy control and promotes everything that is best in school life. But many schoolkeepers can not teach, and so the time and energies of hosts of pupils are squandered. Disorder comes of inability to teach. To keep order takes a large part of the time of the weak teacher. The soul-waste in many schools is appalling. It is easy for the powerful teacher to govern well, for he interests his pupils and leads them on to victory. Teaching power is the *vital* factor in teacher governing power.

5. Heart Power. — Be the pupil's sympathetic friend and helper. Heart power is the fifth element of educative governing power. Love is the last word in the art of educative leadership. The teacher is warm-hearted as well as pure-hearted. In the old education the teacher was master, and drove; in the new education the teacher is the pupil's friend, and leads. The Great Teacher was the loving friend and companion of his disciples. Pestalozzi lived with his pupils, worked

with them, shared their joys and sorrows. You love your pupils and are touched by their infirmities ; you sympathize with them in their temptations and difficulties, and you rejoice with them in their joys and successes. You do your best to make each one strong and good and useful and happy. By friendly looks, kind words, and generous acts you win the esteem and love of your pupils and make them your true friends. In the sunshine of affection all that is lovely in pupil nature buds, blossoms, and bears fruit. Even hateful children become interested and interesting. The tricks and shams and frauds and stupidities and cruelties that blighted the old school life shrink away, for love delights to cast out stupidity and fraud as well as fear.

Teaching is the altruistic profession. The teacher does not think of self, but feels a burning desire to do most for his pupils. He studies to lead them to find out the best things, feel the most exulting emotions, and do the most ennobling acts. His pupils grow altruistic and rival each other in generosity. All help each to know more, do more, be more. It is easy for the sympathetic teacher to govern well, for love makes teacher and pupils coworkers. Heart power is the *winning* factor in teacher governing power.

6. Will Power.—Control through high and elevating motives. Will power is the sixth element of educative governing power. Will stands for effort-making. Will power is the Aladdin's lamp that brings about results and achieves the unexpected and the impossible. Men of great will power lead armies,

lead nations, lead the world. Will power gives us manly men and womanly women. Aristotle had greater will power than Alexander, and Paul had greater will power than Caesar. The loving Jesus had supreme will power.

Will power is the invincible governing force. The teacher plans wisely and executes firmly. You do most for your pupils by leading them through high motives to develop habits of persistency in high endeavour. You lead them through right incentives to plan well their work and persistently carry out their plans. You train them to do their best in the best ways and so become strong and efficient. You manage to infuse into them iron determination and indomitable courage. You cherish self-control by example, by telling about noble people, by training. Each pupil develops the double art of self-control and self-government. It is easy for the decided teacher to govern well, for he is leader. Will power is the controlling factor in teacher governing power.

7. **System.**—Secure order through system. Infuse system into all school work. System is the seventh element of educative governing power. System stands for fitness of things. It transforms a mob into an army. System means order in school work, and order means a time for everything, a place for everything, and method in doing everything. The skilful teacher manages to get these order elements into the warp and woof of school life.

(1) *Time system is essential to order and efficiency.* Regularity and promptitude are the basis of school order. The programme provides occupation

for each pupil during each moment of the school day. The teacher trains the pupils to work to the programme, and thus prepares them for life. Work and recreation supplement each other, and pupils are happy because they are kept interested and busy.

(2) *Place system helps to produce order.* "A place for everything and everything in its place" is as important to the teacher as to the housekeeper or the mechanic. Having places for play, for wrappings, for books, for study, and for recitation enables the teacher to secure good order with much greater readiness.

Training pupils to orderly habits in the school-room prepares them for orderly habits through life. The teacher's desk, the pupil's desk, the schoolroom, and the school grounds should be models of order and neatness.

(3) *Method system works educational marvels.* From the opening to the close of school all movements are signalled by the programme clock. Energy is economized to the utmost. Pupils are trained to efficient methods of study. The most helpful methods of teaching are studied. In all the school work there are definite purposes and right ways of realizing them. He who shortens the road to knowledge lengthens life. Wise methods of work double teacher efficiency and pupil efficiency. Good methods lessen friction and make effort count for most. System is the key to success; it organizes victory. Systematic working habits are worth more to the pupils than the knowledge gained. System organizes

order, and each pupil learns to move to the rhythm of the school. It is easy for the systematic teacher to govern well, for he makes school life orderly. System is the *organizing factor* in teacher governing power.

8. **Tact.** — Manage to utilize all educational agencies. Tact is the eighth element of educative governing power. Tact stands for the wisdom of the serpent blended with the innocence of the dove. It means policy in right doing. Paul adapted himself to all classes. Cicero conciliated his auditors. Even Alexander and Cæsar and Napoleon had to use tact in managing their soldiers. We think of tact as including common sense, wisdom, shrewdness, and skill in managing.

(1) *As a leader the teacher needs to be tactful.* Co-operation must be secured and opposition disarmed. One person can not do much, but many persons working together can build cities, create school systems, and make states. The teacher must manage patrons as well as pupils. He is the natural leader in all educational matters. Success depends on the hearty co-operation of all. At every step tact is demanded, and often the teacher must seem to follow while really leading.

(2) *As a manager the teacher needs a double portion of tact born of wisdom.* Evils must be met and conquered one by one. Misconduct must be made the occasion for deepening the love of right. Every incident must be turned to advantage. Even opposition must be made helpful, as contrary winds are made to waft the ship across the sea. The angry

parent who comes to make trouble must be sent away a friend and helper. The exuberant life of the young must be made educative. Wise management makes the difference between success and failure.

(3) *The educator must exercise the utmost tact.* Whom to help and when to help and how to help are momentous considerations. The end in view is to generate in the pupil a deep love of learning and to foster self-effort. The pupil must be educated to work out his own salvation. The work must be adapted to each pupil, and each one must be encouraged to do his best. Right methods and right habits of study are to be cherished. In a word, the art of teaching requires boundless tact. It is easy for a tactful teacher to govern well, for he manages to make everything help. Tact is the *managing* factor in teacher governing power.

9. **Bearing.**—Assert leadership by your bearing. Quietness with confidence is the ninth element of educative governing power. There is a dignity of bearing and a quietness of manner which we always associate with conscious strength, as there is a nervous anxiety and ill-temper which we invariably attribute to a lack of confidence in one's position or to a very superficial character. The bearing of the teacher either commands or forfeits the respect and confidence of the pupils and patrons. The loud, fussy teacher offends, and the weak, doubting, wavering teacher awakens contempt. The bearing of Washington was such that he never needed to command; his request was law. So should it be with the teacher. It is easy for a quiet and confident teacher to govern well, for he

seems born to rule. Bearing is the *inspiring* factor in teacher governing power.

CHAPTER XI.

PUPIL IMPROVEMENT THROUGH EDUCATIVE MOTIVES.

GOVERNMENT is the power of control that produces and sustains order, but school government is much more: it educates pupils to habitual good conduct and effective study; it organizes order, and through educative incentives leads pupils into habits of law-abiding self-control. Doing right acts from right motives educates.

Motives in the Soul Economy are Incentives.—Ideas occasion emotions; emotions occasion purposes; purposes occasion acts. Ideas awaken desires and so become incentives to acts. A self is rational as well as free, and hence acts from motives. Ideas become desires and purposes, and so move us to do. Motives are at once our incentives to do and the explanation of our acts. Even the child answers "Because" when asked why it did so.

Through Motives we lead.—Motives are inducements to act. Weak motives are slight inducements and strong motives are powerful incentives. From infancy up pupils are led through motives, for they are free and rational. In governing, as in teaching, we study to reach effectively each individual. A large per cent of our pupils want to do the right

thing, and will make a strong effort to do it under any and all circumstances; another class will be influenced almost entirely by the good or the vicious environments; while in most schools will be found a few positively vicious pupils. Well-disposed pupils respond to all right motives; weak pupils need all helpful influences and effective incentives; vicious pupils must be transformed by teacher kindness and teacher tact. All pupils may be led by right incentives, but great wisdom is needed in the choice of motives, and great skill is needed in presenting incentives.

The Teacher determines Pupil Motives.—It is a social axiom that one person may influence the conduct of another. All reforms as well as all debasements rest on this fact. You stand for the best in the life of the pupil; you determine his studies and largely his companionship. Through your example and through stories and through all lessons and through books you give direction to his thoughts and impulses, and awaken ennobling desires and high purposes. You, more than all others, lead pupils to cherish high ideals and strive to realize them. You are the pupil's friend, and in a high sense determine the incentives which control in pupil life. Yours is a fearful responsibility, but each pupil rightly led by you will prove a blessing to society and will be a star in your unfading crown.

Motives help or hurt.—Incentives that lead to right acts are educative motives, but allurements to wrong doing are debasing motives. Rulers of pupils as well as the rulers of men need to study the whole gamut

of motives. What motives help, and do not hurt? What motives hurt, and do not help? These are incisive questions which we must answer. Are we in our school work leading our pupils through the most helpful motives? Are some of the incentives we use hurtful? Let us honestly re-examine the very foundations of our work. Think what it means to your pupils. Proper incentives to good conduct and helpful study make for a grand manhood, but improper inducements work ruin. Our school work must be permeated by the very spirit of high motives. We must root out at any cost every hurtful or even doubtful school incentive; then we can hopefully work to get our pupils to act habitually from right motives.

SCHOOL INCENTIVES.

Our pupils, like ourselves, are very human. In most cases they do not mean to do wrong, but all feel good and bad impulses, and often act thoughtlessly, as the brutes do. But soon all learn to consider before doing, and it is these purposed acts that hurt or help. Incentives to helpful acts are educative motives, but incentives to hurtful acts are debasing motives. Our highest mission is to lead our pupils to act from educative motives. For school purposes it seems fitting to group pupil incentives as hurtful, low, high, highest.

1. **Hurtful Motives.**—Incentives to debasing acts are hurtful motives. The cravings of the appetites and the imperious demands of the passions become debasing incentives when they allure to lawless acts. One who habitually yields to these incentives brutal-

izes himself. Temptations to violate law—hygienic, social, moral—are hurtful motives. Yielding to temptation gives us a world full of degraded human beings. The greatest thing in education is to train pupils to habits of law-abiding self-control. Through educative motives we lead our pupils to resist hurtful allurements and overcome temptations. Incentives to selfish acts are hurtful motives. A selfish man is a base man. One who regards not man nor God is low indeed. Selfishness is the sum of everything detestable. Yielding habitually to selfish incentives makes one mean, ungenerous, heartless. Through love and all generous and kindly incentives we lead our pupils to root selfishness out of their lives.

2. Low Motives. Incentives based on low considerations are low motives. Their name is legion. Low motives unavoidably tend to become hurtful, and at most, when permissible, are temporary expedients. They are not educative. They do not make for manhood. Fear is a low motive, but love casts out fear. Prizes, per-cent marks for conduct and scholarship, and all rivalry-fostering distinctions are low incentives that tend to become hurtful. Extraneous incentives to good conduct and effective study must be counted as low and hurtful motives.

“I have been thirty-five years in the schoolroom as pupil and teacher; have lived a good part of that time in the atmosphere of prizes and per cents; have watched their false spur and unnatural colouring of character; have looked upon noble ambition perverted to things abnormal; have seen the physical, intellectual, and moral wreckage that ensued; and as the result of personal investigation and personal experience, I do not hesitate to pronounce the whole system of incentives, to which reference has

Educative Incentives to Good Conduct and Efficient Study.

Debasing Motives	Low Motives	High Motives	High Motives	Desire for Pupil Incentives.
Highest Motives				
<i>Malevolent Motives</i>	<i>I</i>			<i>Desire for Good Standing</i>
<i>Selfish Motives</i>	<i>II</i>			<i>Desire for Approval</i>
<i>Fear, Flattery</i>	<i>III</i>			<i>Desire for Knowledge</i>
<i>Rivalry, Marks</i>	<i>IV</i>			<i>Desire for Efficiency</i>
<i>Egotistic Motives</i>	<i>V</i>			<i>Desire for Self-Control</i>
<i>Altruistic Motives</i>	<i>VI</i>			<i>Desire for Future Good</i>
<i>Beauty Motives</i>	<i>VII</i>			<i>Sense of Honor</i>
<i>Truth Motives</i>	<i>VIII</i>			<i>Sense of Right</i>
<i>Duty Motives</i>	<i>IX</i>			<i>Sense of Duty</i>
				<i>Royal Motives.</i>

been made, as abnormal, unprofitable, false, and immoral. Their entire tendency is to temporary results, to stifled interest, to the recognition of an unnatural means as an end, to the development of a selfish spirit, and to dishonest practice, as well as to over-pressure and overnervous and physical strain."—R. W. SLARCH.

3. High Motives.—Incentives that make for manhood are high motives. Habitually acting from high incentives develops a noble manhood.*

(1) We appeal to self-incentives. These are incentives to self-betterments. Our loving Father plans each life, and implants in each one burning desires to make the most of that life. All right incentives to self-betterment tend to enoble. The pupil desires to stand well, desires esteem, desires approval because he is worthy ; no marks or reports are needed ; only approving smiles and encouraging words. The deserving pupil feels that he stands well. The pupil desires knowledge for its own sake ; this is the divine incentive to study. Our pupils are intensely interested, for we lead them to find out. All extraneous incentives to study or to duty are hurtful. True teaching commands attention and sustains interest. The pupil desires power, desires efficiency, that he may act well his part. As our model, Jesus lived a perfect life and taught us to work on toward perfection. A noble aim is a high incentive to a noble life. The pupil does his best to-day that he may be able to do better to-morrow. We do well to encourage and give wise direction to the aspirations of our pupils.

(2) We appeal to altruistic incentives—*incentives to social betterment*. The greatest of these is love.

* Royal Incentives, E. E. White, p. 153, School Management.

Love and duty are twin sisters, and go hand in hand. Pupil love responds to teacher love. Love makes duty easy. Beautiful friendships elevate. Generosity makes real heroes. Kindness is a crown of glory. We think of God as our loving Father, and of all men as our brothers. God is love, and in the ratio that we become Godlike our motives become altruistic. Nothing appeals more strongly to most pupils than the fact that they can help the teacher and help their fellow-pupils. Kindness, generosity, friendship, gratitude, and reverence grow into life habits.

4. Highest Motives.—Incentives of the true, the beautiful, the good, are the highest motives. We rise above egoistic and altruistic considerations, and act from cosmic motives. We love the higher life.

(1) Truth is a powerful incentive. The search for truth, the desire to impart truth, and the earnest effort to live truth, are in the highest degree ennobling. The pursuit of truth dignifies life and gives the highest joy. No one wonders that the mightiest men devote their lives to this pursuit. We lead our pupils to find truth, and so they get to hunger and thirst for truth. No other incentive to study is so strong and so elevating. The ideal school is verity embodied. No shams, no pretenses, no lies, are tolerated. The teacher feels truth, looks truth, speaks truth, acts truth. The pupils become truthful, for they breathe an atmosphere of truth.

(2) Beauty is a mighty incentive. No one knows how largely his life is affected by the beautiful, the sublime, and the humorous. The beautiful and sublime in Nature and art and literature do much to re-

fine and elevate. We lead our pupils to appreciate beauty and to produce beauty. Each one studies to keep himself clean and neat. Each one in song and speech and movement and drawing and moulding creates beauty. Each one feels exaltation as he becomes absorbed in Homer and Dante and Milton. Above all, each one endeavours to live a beautiful life. The sense of honesty and honour is beautiful.

(3) Duty is the supreme incentive. Acting solely from a sense of duty, doing right because it is right, does most to enoble. Man is a constitutional sovereign and reigns through law. The universe is so planned that all good comes through law-obeying. Duty is doing right from right motives. Man is a constitutional sovereign, and reigns by doing right. Above all, education develops the duty habit.

We begin with the infant. Obey, is the only item in its ethics. Somehow it gets to feel that it ought to obey its parents. This is the budding of conscience, the beginning of a life of duty. To the child, parental will is law, is right. As the loving mother trains the little one to walk, so she trains it to obey.

We train the child to do right. It gets to feel that it ought to do right—ought to obey its parent, its teacher, and its school laws. Parents and teacher manage to get the child to obey willingly, thus educating conscience and will. No theories, no dogmas, no arguments, no rods, are permissible. Lovingly lead the child into habits of law-abiding.

We lead the older pupils to strengthen law-abiding habits. The pupil's ethics widen and widen. God is always the loving Father and the beneficent

lawgiver. Jesus and the teacher are always the dearest friends. Law-abiding self-control is always the greatest thing. Duty dignifies and re-enforces all other proper motives. The pupil very much wishes to do something. "Is it right?" "Yes." "Then thank God and do it."

WHAT MOTIVES.

School management is the art of securing good conduct and efficient study through high motives. When seen from the standpoint of duty, all is plain to teacher and pupils. Like instruction, motives must be adapted to individual pupils. It is safe to rely upon the highest incentive which will move the pupil. Duty and justice and generosity and the desire for betterment and the sense of honour, in most cases, will prove all-sufficient to induce good conduct and efficient study. Some pupils, however, must be led for a time through other motives, such as approval, public opinion, and consequences. The earnest effort must be to secure right conduct, but when a pupil has gone wrong he must be brought back to the path of duty through educative suffering.

Incentives conflict. Our appetites and passions and selfish impulses entice us to do debasing acts, while all ennobling incentives move us to do right. This irrepressible conflict goes on in every human heart.

One victory strengthens, and many victories root right doing into habit. In this momentous battle the teacher deeply sympathizes with the pupil, and does everything possible to strengthen him; and in case

he goes wrong he gently leads him through educative motives back to the path of duty.

CHAPTER XII.

PUPIL IMPROVEMENT THROUGH EDUCATIVE SCHOOL REGULATIONS.

We think of the School as an Embryo State.—The pupils are trained to make laws and obey them, and are thus educated for citizenship. The ideal school is an embryo republic, in which the prime object of government is to educate the pupils up to self-government. The school life thus becomes a training for good citizenship. Pupils develop the habits of self-restraint, self-control, and self-mastery, and these are the highest products of education. The school becomes an impressive object lesson of the reign of law, and of the great truth that all good comes of law-abiding.

Wise Laws are Fundamental.—The old schoolmaster was a despot, and with all his rules and all his rods has passed away. Though often a blundering tyrant, he did what he could. Peace to his ashes! The teacher is not a boss. The goody-goody teacher, with no laws and no punishments, is the opposite extreme and is a well-meaning failure. The teacher is not a sentimental weakling. The true teacher, through educative regulations leading up to self-con-

trol and law-abiding habits, is the golden mean. The teacher is the friend and leader.

PRINCIPLES DETERMINE LAWS.

Not caprice, but educative principles determine school regulations. What laws will prove most helpful? What regulations will best prepare the pupil for life? The following guiding truths will enable us to answer these questions.

1. **School Regulations must be Educative.**—School laws are made for the pupil, just as the Sabbath was made for man. Everything to help and nothing to hinder is fundamental. Liberty through law is the aim. Orderly freedom is the ideal. In the school world each pupil is kept in touch with the ideal, and is trained to habitually do the things that help and avoid the things that hurt. The school code must be educative.

2. **School Laws must be Positive.**—“Do, and therein have well-being.” “Shall not” characterized the rules of the old schoolmaster; but in the new order of things doing the right takes the place of forbidding the wrong. “Happy are they that do his commandments.” School regulations are educative, and hence positive. “Be prompt” takes the place of “Must not be tardy.” “Be truthful” takes the place of “Must not tell lies.” The school code is positive.

3. **School Regulations must be Few, and hence General.**—They are to be such as apply to all schools and all pupils. They must require lines of conduct and must cover all the ground. All specific cases come under the general laws, so that it may never become

necessary to make new regulations. The school code must be general.

4. **School Laws must be Practical.**—School regulations are working laws that lead to life habits. They enter into the warp and woof of school life. Teacher and pupils live the regulations, and thus develop into habits the school virtues. Impractical regulations can not be enforced, and laws not obeyed hurt and do not help. The school code must be practical.

5. **School Laws must be Popular.**—School regulations must be sustained by public sentiment. They must have the hearty support of the pupils and the patrons as well as of the teacher. School laws must commend themselves to the common sense of all. Popular school regulations will have the moral support of the patrons, and pupils will readily obey such laws. The school code must be popular.

A school code harmonizing with these principles embodies the laws of school life. Each law is educative, positive, general, practical, popular. Such regulations give definiteness to school government.

Educative School Code. { 1. Law of Quietude.
2. Law of Regularity.
3. Law of Promptitude.
4. Law of Propriety.
5. Law of Duty.

1. **Work quietly.**—All education begins in silence, and the first school lesson the pupil learns is that of quietude. Above the teacher's desk "Work quietly" should be written large; but the quietness of pleasant work is meant, and not the breathless stillness produced by fear. Teacher and pupils study to do things so softly as not to disturb others. Quietude must be

the law of the schoolroom. Teacher and pupils study to avoid whatever disturbs others, such as whispering, noisy studying, noisy moving, fixing fires, and loud talking. Stillness favours study and characterizes the ideal school.

2. **Attend Regularly.**—Teacher and pupils must be regular in all school work. Persistency is the law of achievement. In school work, as in life work, regularity is fundamental. The habit of regularity promotes our physical, mental, and moral well-being. Regularity is a cardinal school virtue.

3. **Be Prompt.**—Teacher and pupils must be prompt. The habit of being on time is invaluable. The school trains pupils to work to a programme, and promptitude is counted a leading virtue. Promptitude characterizes the world's workers. Regularity and promptitude are the basis of order. They are the pillars of good school government.

4. **Act properly.**—Teacher and pupils must act with propriety. We think of good manners as proper conduct. Order is eminently proper. During school hours it is proper that pupils should communicate through the teacher. Kindness is proper, earnest study is proper, decorum is proper. This law covers much of conduct and leads to the formation of many desirable habits. Conduct worthy of a pupil and worthy of a gentlewoman or a gentleman is required by the law of propriety.

5. **Do right.**—Teacher and pupils must do right. The duty impulses are imperative. I may be polite, but I must be truthful. Duty is the corner stone of the art of school management. The habit of doing

what we believe we ought to do is the essence of character growing. Conscience stands for duty, and doing right stands for law-abiding.

ENACTING THE LAWS.

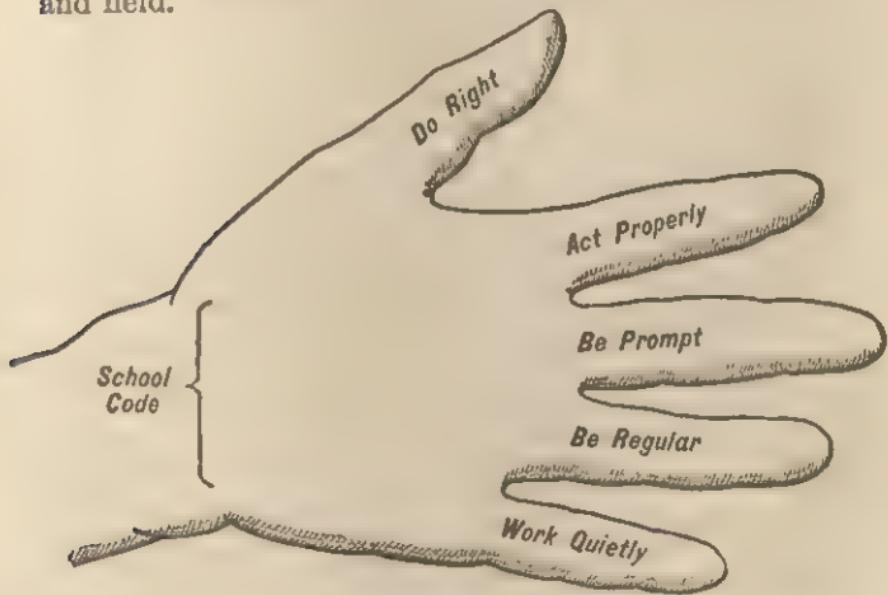
The pupils, the teacher, and the school board make the school regulations. The school is an embryo State. The teacher and the pupils enact their own organic laws. Pupils are trained to make, obey, and sustain laws. School life thus prepares for real life.

1. The Teacher submits the Regulations.—The teacher submits and explains the regulations one by one. The teacher is the friend and leader, and it is fitting that he should propose educative laws and make clear their desirability. Explanations and illustrations are brief and plain.

2. Teacher and Pupils adopt the Regulations.—They unite in enacting laws for the school. The pupils are led to favour the regulations and to realize in some degree their fitness. It is important to have even the younger pupils feel that they in a degree make the laws which they are to obey, just as the people make their laws.

3. The School Board approves the Regulations.—It is well in small schools to have the school board present, but otherwise the action of the board approving the regulations can be reported to the pupils. The school board stands for the State, and regulations thus approved become State laws, as do bills passed by the Legislature and signed by the governor.

4. The Regulations are adopted One by One.—Some impressive method of adopting the code is helpful. It is the first day of school. The leading classes have been organized and lessons assigned. The afternoon recess is over. Pupils are still fresh and happy. The members of the school board or school committee are present. Attention is called to the programme. Then in some attractive way the pupils are led to appreciate and adopt the school code. It is an impressive plan to draw on the board a picture of the hand, and to write the laws on the fingers as they are adopted. Close attention is thus secured and held.



Teacher.—Pupils, that we may have good order and good work we must have good regulations. I think we can place on the fingers of one hand all the laws we shall need. I want you to unite with me in

making our school regulations. Do you think the teacher should work quietly? (Pupils all raise hands.) Should pupils work quietly? (All hands are raised.) Will you join with me in making "Work quietly" one of our school regulations? (All raise hands.) Now I will ask all who will unite with me in adopting "Work quietly" as one of our laws, to stand. I am glad to see you all stand. Now please raise your left hand. Now write on your little finger, as I do on the board, "Work quietly."

Each of the regulations is considered and adopted in a similar way. Thus in half an hour the school code may be intelligently and impressively adopted. The members of the school board will sign the prepared code in the presence of the school, thus giving their sanction and influence to the laws adopted. The code hand is left on the board, and as new pupils come in they are led to assent to the regulations.

The pupils come to regard the regulations as their laws, and hence learn to cheerfully obey and readily sustain them. The true idea of school government is thus realized. The governing force is from within, and not from without. Pupils develop the power of self-control and the habit of law-abiding. The best possible foundation is laid for educative school government and for good citizenship.

CHAPTER XIII.

PUPIL BETTERMENT THROUGH EDUCATIVE LAW-ABIDING.

The Teacher controls up to Self-control.—School management is eminently the art of developing habits of law-abiding self-control. The pupils learn to think of the school as a larger self, and of law-abiding as self-obedience. All wise school work is educative, but good conduct in obedience to self-imposed laws is the educational superlative. The practical realization of this vital truth will mark an educational epoch.

Order is Cheerful Law-abiding.—Order is fitness. The school code, written or unwritten, voices the fitness of school conduct. The teacher leads the pupils to live the organic laws of the school and thus develop law-abiding habits. This is what is meant by good order. The old schoolmaster enforced his rules, but the true teacher governs up to self-government.

LAW OF QUIET WORK.

We will learn to work quietly.—Real education begins in silence. To keep still is the first school lesson. Each one learns to so work as not to disturb others. School work is educative in the ratio of earnest work done quietly. How may we best develop habits of working quietly?

1. *The Conditions must favour Quietude.* We plan to make quiet work easy. Single adjustable desks are first thought of, as they secure isolation and comfort. Writing tablets as substitutes for slates are

the next suggestion. Doors made to open and close silently are the third consideration. The hourly recess is fourth in the list, as it does so much to make quiet work delightful. Pure air, abundant light, and proper temperature are essentials. Fixing fires, getting drinks, sharpening pencils, asking questions, are recess incidents. Teacher, you will do well to make a long pause here. *Tact* will save you a world of trouble.

2. *By Example the Teacher must impress Quietude.* By working quietly the teacher best leads the pupils to do quiet work. "Learn to work quietly" is written large above the teacher's desk, and the teacher embodies this law. He speaks and moves and works quietly. His management is energetic and his teaching is full of vigour, but he keeps in mind that it is the lightning, and not the thunder, that kills. He avoids boisterousness, clapping, pounding, stamping, scolding. A loud teacher will likely have a noisy school. Such a teacher is a school nuisance and should be reformed or abated. The quiet, earnest teacher is a treasure.

3. *Utilize Altruistic Incentives to Quiet Work.* Each pupil desires the good of all. No one wishes to work injury to another. Working quietly helps and does not hurt. It cultivates generosity and good will. Pupils abstain from whispering because it works injury to others, and each one comes to feel the school spirit—to help and not hurt.

4. *Training Pupils to Habits of Quietude is essential.* Lead the pupil to work quietly until quietude becomes a habit. Each one learns to study quietly, to

move quietly, to speak softly. When the pupil does anything noisily he is requested to do it again quietly. Soon the pupils become toned down, and come to speak softly and move quietly. They learn to abstain from whispering and other disturbing noises, for these are felt as grating discords.

5. *Breaking up Noisy Habits is necessary.* Example, altruistic incentives, and training will work wonders in transforming noisy children into quiet pupils. In some cases, however, gentle reproof or some deprivation is necessary to work a cure. The pupil must be led to think and try. The desire and determination to have a delightfully quiet school is felt in every nerve and fibre of the school. Pupils and teacher work together to this end.

6. *Persistent Endeavour develops Quiet Habits.* The teacher manages to have a cheerful and quiet school. Patiently, kindly, persistently the work goes on day by day and week by week. All learn to work quietly, and each one comes to feel a pleasure in quiet work. Our ideal is a quiet, cheerful, working school, and we all, pupils and teacher, feel proud when we realize our ideal. This is order; this is real education.

LAW OF REGULARITY.

We will strive to be Regular. — Regularity characterizes the world's successful workers. The octogenarian, in most cases, ascribes to regular habits his long life. The great leaders of men in all fields of high endeavour are regular workers. Regularity is one of the cardinal school virtues, and to root regularity into a life habit is an important educational

achievement. How may we best lead our pupils into habits of regularity?

1. *Teacher Example is Most Potent.* A teacher is a fit pupil leader when he is a model of regularity. He follows a well-considered plan, duly proportioning work, recreation, and rest. His school work is an object lesson of regularity. Pupils are bound to make the most of themselves, and so must be trained to regularity. They must cultivate the habit of regularity in their studies, in their reading, in their exercises, in their amusements, in their eating, and in their sleeping as well as in their school work. By his own example, and by the stories of Washington and Kant and Gladstone, the pupils are stimulated to form habits of regularity.

2. *Interest leads to Regularity.* The school work is made so interesting and the lessons are made so helpful that pupils are unwilling to miss a single hour. The habit of regular attendance is formed. The pupils are led to realize that vigorous health depends on regular physical habits, and that mental vigour depends on regular habits of study. Especially are pupils impressed with the importance of regular attendance in order to have good school work. But, after all, interest is the great incentive. School stupidity works irregularity.

3. *The Irregular must suffer the Consequences.* Irregularity hurts the individual and hurts the school. It is a misfortune in any case, and the irregular pupil must suffer the consequences. The habit of irregularity must in some way be cured. Self-incentives and altruistic motives and duty may be pressed, but in

rare cases, after all, reproof, deprivation, or even temporary suspension, may become judicious. In some way irregularity must be broken up, and the pupil must be led to form the habit of regularity.

LAW OF PROMPTITUDE.

We will try to be prompt.—As a school virtue, the habit of promptitude deserves to be written in letters of gold. It is a great thing to be habitually on time. Promptitude is counted so important that schools vie with each other in the effort to secure it. How may we best educate our pupils to habits of promptitude?

1. *Teacher Promptitude incites Pupil Promptitude.* "In seven years I have never been tardy," said an earnest teacher. "During my entire course in college I was never tardy," said Garfield. School is called and dismissed on time. Each exercise is begun and closed promptly. A prompt teacher will usually have a prompt school. The prompt teacher can consistently insist on pupil promptitude. Examples of promptitude from the lives of men of action will reinforce the example of the teacher.

2. *Promptitude helps Others.* Promptitude is a social as well as a personal virtue. Washington thus reproved a tardy subordinate: "Sir, you may choose to waste your own time, but you have no right to waste ours." The prompt pupil helps others. In life, promptitude is a charm and tardiness an offense. In the home, meals are served on time. In the church, services begin and close on time and no laggard disturbs the worshippers. In the orderly school, teacher

and pupils are habitually on time, and rarely does a tardy pupil interrupt the work.

3. *Training fixes the Habit of Promptitude.* It is easy to be prompt when the habit is formed. You arouse the pupil to overcome all obstacles and be prompt during the first week. It is less difficult to secure promptitude during the second week, and still less during the third week. Soon the pupil becomes prompt from habit. The habit of being prompt has great advantages, as may be illustrated by life instances, showing the gains from promptitude and the misfortunes from dilatory habits. The railroad reinforces the school in training to the habit of promptitude.

4. *Tardiness must be remedied.* The habit of tardiness must be broken up by forming the habit of promptitude. We use all high motives, and still, in rare cases, we find it necessary to use gentle reproof, or some other helpful remedy. The wise teacher makes provision for special cases, so that pupils, though late, are not counted tardy up to a fixed time. One pupil in twenty may require some impressive lesson, but usually the spirit of the school will remedy avoidable tardiness. Teacher and pupils greet with smiles the prompt pupils, and each pupil becomes inspired with the spirit of promptitude. The sense of honour as well as the sense of duty incites to promptitude. Mountains of difficulty will be overcome, and pupils will be on time. Promptitude in all the school work grows into habit, and the pupil is saved from the ruinous habit of tardiness.

LAW OF PROPRIETY.

We will learn to act properly.—Propriety is fitness in conduct. It includes all we mean by gentle manners and good deportment and politeness and decorum. It includes dress and address. Proper school conduct prepares for proper life conduct. Order is proper, and all disorder is improper. Cleanliness and neatness are proper. Industry, regularity, and respect for authority are proper. Law-abiding is proper, but lawlessness is improper. How can we best develop habits of propriety? How can we best educate our pupils to be womanly and manly?

1. *Example impresses Propriety.* Pupils imitate others, but most of all the teacher. The ideal teacher is a proper person and a model of propriety. In dress and in manner, in repose and in action, in the school and in society, the teacher is an embodiment of propriety. The teacher *is* what the pupil is to become.

2. *Altruistic Motives work the Best Results.*—Politeness is treating others properly. Kindness and generosity and refinement are expressed in good manners. A gentleman is gentle and unselfish. It is always proper to give another the preference. Teacher and pupils will think of many illustrative incidents. Opportunities occur at every step to make others happy by treating them properly. Apt stories are the most helpful lessons.

3. *Training fixes Habits of Propriety.* Acting properly must be rooted into habit. As we learn to pronounce properly and talk properly, so we learn to

act properly. Good school manners are carried to the home and become proper table manners and proper society manners. Immense patience is needed as well as tireless effort, for bad habits persist. In every way the ideal of proper conduct is elevated, and all influences are used to induce pupils to strive always to realize their ideal.

4. *Educative Remedies break up Habits of Impropriety.* Pupils must unlearn improper habits. Bad manners must grow into good manners. We meet fearful discouragements. Pupils are loud and rough and selfish and cruel. Their manners at home and at school are horrid. How are we to transform these rough, untutored children into accomplished men and women? We can and will accomplish this. In some way we must lead the most rude to try to act properly, and keep on so trying and so acting. We warmly approve and commend proper conduct, and thoroughly disapprove improper conduct. We lead the pupil to take himself in hand and go to work in earnest. One by one offensive habits are broken up and habits of proper conduct are acquired. But habits are stubborn things. However willing, pupils often need impressive helps. We appeal to all high incentives, but at last, in exceptional cases, we find it wise to use proper educative remedies.

5. *Persistency must succeed.* Think of the work it takes to secure correct pronunciation! How almost infinitely more difficult is it to secure propriety in conduct in all the relations of life! But, however adverse the pupil's environment, and however unpromising this uncouth specimen, we can not afford

to fail. Wise and persistent effort has succeeded and will succeed.

LAW OF DUTY.

We will try to do right.—Moral education blended with aesthetic and mental and physical culture is ideal. Right is accord with law. Be law-abiding, is our one imperative impulse. Our inmost self incites us to find the right, to choose the right, and to do the right. This is conscience, and conscience stands for duty. Acting conscientiously develops conscience just as reasoning educates reason. As intellect, self discerns right, as conscience self feels right, and as will self does right. Moral culture roots the moral virtues into moral habits. Conscience is central. Moral conduct is the educational ultimate. How may we lead our pupils to act from a sense of duty?

1. *Example is most effective.*—The Great Teacher lived a perfect life. His is the ideal life. Good men try to live as Jesus lived, and so become moral leaders. “A teacher must have a good moral character,” is the race conscience organized into law. We think of a teacher as embodying in a good degree the moral virtues, and hence we intrust to him our precious children. In every impulse and word and act the ideal teacher is pure and honest and generous and just and truthful. He does right because it is right. By his life the teacher does most to lead his pupils to do right. His own example is re-enforced by examples from the lives of illustrious men and women.

2. *Moral Teaching is Fundamental.* Right ideas occasion right impulses and thus become right acts. But moral lessons must be concrete, and duty must be

taught from life. Hygienic laws are taught in acts. The pupil ought to be temperate as well as truthful. The moral virtues are presented in stories and incidents. Biography and history are rich in the best lessons. Right ideas lead to right impulses and right acts. The pupil must know duty in order to feel duty and to do duty. Duty is taught incidentally in all school work, but special conduct lessons are of the highest possible value.

3. *Duty is Positive.* Obedience to parents is duty. Law-abiding is duty. It is right to tell the truth and act honestly. We keep before the pupils the moral virtues, and rarely refer to vices. As in art ideal forms are kept in view, so in morals; the moral virtues are kept before the pupil. Pupils become so interested in honesty that dishonesty is not thought of. They learn to so love the moral virtues that vices become hateful. Doing right educates conscience.

4. *Training converts Example and Precept into Habits.* The teacher leads the pupil to do right and to keep on doing right. Thus moral habits are formed and fixed. Moral teaching and moral acts not carried over into moral habits are wasted. Moral habits, as a fact, are more readily formed than evil habits, for conscience is on the side of right. Moral training makes duty impulses imperative in the life of the pupil.

5. *Educative Punishment is a Moral Necessity.* The aim of school punishment is to lead the wayward back to the path of duty and keep them in it. Punishment is meant to impress the fact that the way of the transgressor is hard, and that suffering follows lawlessness. The disobedient pupil learns through

suffering that only the pure in heart, the law-abiding, are happy or can be happy. Our loving Father so planned the universe that all violations of law call for punishment. When we violate physical laws we suffer and so reform. When a child violates home laws or school laws it is saved through suffering. When we act dishonestly we feel remorse and the disapproval of loved ones, and so suffer back to duty. God, states, parents, teachers, so plan that transgressors bring on themselves the suffering necessary to reformation. We in love so manage that the offender suffers in order that he may get right and keep right.

6. *Moral Culture must be persistent.*—Persistent endeavour on the part of the teacher and pupils will surely fix the habit of well doing. This is the greatest thing in education. The pupil learns to place duty above everything else, and comes to feel that it is indeed better to be right than to be president or a millionaire.*

CHAPTER XIV.

PUPIL BETTERMENT THROUGH EDUCATIVE PUNISHMENT.

Punishment stands for Remedial Measures.—The physician prescribes medicines as remedies for diseases caused by lawlessness. The Great Physician prescribes spiritual remedies for sin-sick souls. The educator prescribes educative remedies for wayward pupils. In all these cases repentance conditions restoration. The

* Read Chapter XXVI in connection with Chapter XIII.

patient comes to obey law, and so gets well. The sinner ceases to hate and learns to love, and so is saved. The wayward pupil turns and becomes law-abiding, and so is restored. This is repentance. Law-abiding is the condition of health. Remedial school agencies are educative when they induce a change of heart and a change of conduct. The teacher, next to the parent, is the pupil's truest friend. Kindly he leads his pupils to abandon hurtful ways and walk in the paths of peace. He thinks of punishment as a means of helping pupils to cease doing wrong and begin doing right.

Educative Suffering works Reformation.—We marvel much when we grasp the philosophy of punishment. Through weakness we yield to temptation, but through suffering we grow strong to resist temptation. We so manage that the offending pupil so suffers as to quicken conscience. Educative suffering leads him back to duty and so makes him strong to choose and do the right. There is absolutely no other way to work reformation. This is the divine plan. Educative punishments are not pleasant, but they work the peaceful fruits of righteousness.

PRINCIPLES RELATING TO PUNISHMENT.

Principles determining School Punishments.—Why do we punish? When should we punish? How should we punish? The wise teacher ponders long over these questions. Even light punishments are infinite in their consequences. No wonder that the angels pause here. No wonder that our schools, our armies, and even our penitentiaries have abandoned

corporal punishments. No wonder that dilettanti shudder at the thought of school punishment of any kind. But offences will come, and remedies must be used. The earnest teacher, like the earnest physician, asks for light and courage. What are the teachings of human nature and experience? Each teacher will glean for himself, but as suggestive, attention is called to some fundamental and guiding truths. School punishments, it must be kept in mind, are always remedial and self-inflicted. We do not punish the wayward, but we so manage that they punish themselves.

1. *Punishments should be Educative.* They should tend to quicken conscience and strengthen will. Love casts out fear, and the punishment works in the offender's heart the resolve to cease waywardness and become law-abiding. Judicious punishments foster self-control and a love of right. They incite the pupil to pause and change his course. Educative punishments cherish law-abiding.

2. *Punishments should be Reformatory.* Will this particular punishment help this particular offender? Arthur swears during recess. I give a lesson to the school on swearing as a bad habit. I reprove Arthur privately, and he promises to try to break up the swearing habit. The right punishment properly administered helps the pupil to reform. The wise teacher, like the skilful dentist, studies to avoid occasioning unnecessary suffering. Reformatory punishments work repentance.

3. *The Punishment should be natural.* It should follow as a natural consequence of the offence. God has so planned Nature and man that punishment every-

where follows transgression. Herbert Spencer insists that parents and teachers should carry out the divine plan. As the teacher gains deeper insight into pupil nature, he more and more discovers the fitness of consequential punishments. Pupils feel the justice of such punishments, and they are educative and reformatory. The relation of the punishment to the fault needs to be profoundly studied. James during recess abuses the smaller boys. As a natural consequence he is deprived for a time of the privilege of playing with the other pupils and is sent out to play alone. This remedy is a natural consequence and works repentance. After two or three days James requests restoration; he is cured. But even the most capable teachers are sometimes compelled to use other than consequential punishments.

4. *The Punishment should be Just.* The degree of severity should bear a just relation to the offence. The sense of justice is very active in pupils, and undeserved as well as undue punishment is resented as an injury. The boy kept in for putting his hands in his pockets becomes sullen, and is hurt and not helped. In punishment it is always safe to err on the side of mercy. Some one has well said: "We would not exclude punishment as a means for establishing good order, for punishment is necessary; but, to be adequate, it must always be just, and the offender must feel the justice, otherwise its force upon him is lost. Let every pupil feel the reasonableness and justice of every punishment. Bring out every manly and womanly attribute, every lofty and unselfish ambition."

5. *Punishments should be Mild and Rare.* The skilful teacher rarely punishes, and usually finds gentle reproof or mild restraint all-sufficient. Sometimes deprivations and even suspensions become necessary. Through royal motives the pupils are led to royal conduct. No one thinks of medicine except in cases of sickness, and no one thinks of punishment except in case of lawlessness. No punishment must become customary.

HELPFUL SCHOOL PUNISHMENTS.

These are such as tend to work reformation. Paul was thankful that his erring brethren sorrowed to reformation. The pupil has gone wrong; the purpose of punishment is to lead him to cease wrong-doing and begin rightdoing. Suffering is educative when it works reform. Nature cures. But educative punishments, like suitable medicines, help to produce curative conditions. They work in the pupil's heart a love of law and an aversion to lawlessness. They induce the determination to cease offending and to become law-abiding. Corporal punishment in most cases hurts and does not help, because it awakens hate rather than love. All punishments which tend to antagonize must be forever abandoned. Helpful school punishments accord with the above principles and tend to pupil betterment.

SILENT DISAPPROVAL.

Teacher and pupils strongly approve law abiding. The pupil who habitually works quietly, attends regularly, executes promptly, acts properly, and does right,

is a true hero. Teacher and pupils thoroughly disapprove of lawbreaking. Every nerve and fibre of the school express disapproval of the noisy, tardy, unmannerly, selfish, cowardly, lying pupil. Kindness and this thorough disapproval tend to work reformation. The wayward pupil suffers, reflects, reforms. In our best schools, as in good society, silent disapproval is the great remedy. School sentiment wisely directed is a helpful punishment.

REPROOF.

This is the one safe, salutary, available, effective school punishment. Pupil faults usually come of thoughtlessness rather than of viciousness. Gentle reproof gives pause, and opens the heart to all good influences. Reproof is like medicine: it does not cure, but it removes interferences and stimulates right effort, and so assists Nature. The kind teacher, as a true friend, takes the penitent pupil by the hand and gently leads him into right ways. Reproof may be general, or private, or public.

1. *General Reproof.* The offender is reached through the offence. Mary has been fussy, and has repeatedly disturbed others by whispering. At the close of class or school the teacher says: "One of you has failed to work quietly, and so has disturbed others as well as myself. We all agreed to work quietly, and no one can afford to be a lawbreaker and so injure himself and others. I earnestly ask you to think." A pupil so considerately dealt with does think, and resolves to reform. Other pupils are strengthened. In my own extended experience I

have found silent disapproval and general reproof the only punishments required in the management of nineteen pupils out of twenty. From its very nature general reproof is the most helpful of all school punishments. There is no limit to the helpful ways in which it may be used.

2. *Private Reproof.* This is the punishment commended by the Master : " If thy brother offend thee, go and tell him alone." You have failed to reach Andrew. You ask him to take a walk with you. Kindly, as his friend, you tell him of his faults. You greatly desire to have him do right. Will he ? Teacher and pupil stand heart to heart. The boy's heart is touched and he is saved. Even with hardened offenders private reproof is marvellously effective. In this, as in all educative punishments, love is the curative agency. The warm-hearted teacher through kindness leads wayward pupils back to duty.

3. *Public Reproof.* The offence has been public and obtrusive. Again and again William has used profane language during recesses. You have failed to reform him. You give lessons on proper language and on the utter baseness of profanity. You mention William's bad habit, and request the pupils to aid him to overcome it. Public reproof is a powerful but dangerous punishment, and should be used sparingly and with great discretion. Even when offences are public, private reproof may prove most effective. " Reprove not a child in the presence of another," is a safe and sacred rule. It is a fearful thing to break down the pupil's self-respect and blunt his regard for public opinion. The sense of honour must be cher-

ished. The pupil in all cases must feel that all are his friends, and that he suffers for his own good.

4. *But Public Opinion has its Place.* If the pupil can not be moved by either general or private reproof, a severer punishment becomes necessary. At a favourable moment the teacher presents the matter to the school. It has become his painful duty to reprove publicly one of their number. He has laboured earnestly to induce Charles to do right, but has so far failed. He mentions his name, not to wound his feelings, but to arouse him, and to give all the pupils an opportunity to aid him to correct his faults. All agree to help. The offender feels that he is in the hands of friends who mean to do him good. He feels ashamed of his conduct, and resolves to reform. The tremendous moral influence of the school strengthens him. In the effort to aid another each pupil is benefited. Silently but surely the work goes on. The erring one feels, reflects, resolves, yields to the power of public sentiment and the promptings of his better nature.

PRIVATION.

Restraint and deprivation supplements kindness. Lawless pupils must learn to respect law. Abused privileges are forfeited and slighted opportunities are lost, but reformation must work restoration.

1. *Deprive of Recess.* Pupils greatly enjoy the common recess, and to be deprived of it is a severe punishment. Hugh would get into fights nearly every recess. For two weeks the teacher sent him out to play alone. He promised reformation and kept his promise. The sense of justice is very strong

in pupils, and must be respected. All feel entitled to recess, and no one should be deprived of it except for hurtful conduct during recess, or for some other equally good reason.

2. *Deprive of the Privilege of going Home with the Others.* A boy mistreats younger pupils, is quarrelsome, or uses bad language. He is detained and sent home by himself. Keeping after school is often hurtful and seldom justifiable. In such instances as the above it is clearly a natural punishment.

3. *Deprive of Position.* Irregular pupils and pupils who habitually whisper forfeit seats. Negligent and irregular pupils forfeit their class standing and drop into lower and lower classes. A pupil who does not try is deprived of the teacher's approval. In a word, privation of a privilege follows its abuse. The pupil recognises the justice of the punishment, reflects, reforms.

SUSPENSION.

Judicious suspension induces consideration and so tends to work reformation. A pupil without a school is like a man without a country. The pupil suffers, and his lonesomeness is helpful. But the suspension must be evidently just and natural. Insubordination, contaminating influences, gross immorality, general worthlessness, and chronic violations of the school code may justify suspension. Even in the absence of specific law, the teacher's position gives him the authority to suspend. Still, this punishment should be used sparingly, and, as a rule, only with the older pupils. Children under ten years of age should rarely be suspended. Wise discretion must be exercised.

The teacher seeks to save. We give one actual case of suspension.

James proved insubordinate. The teacher kindly suspended him for an indefinite time. After a week he returned, made a manly apology, and began a course of good conduct.

Sometimes suspension embitters and so injures; suspension must be managed with great skill. As in all cases of punishment, there is need of good sense and a good heart. Frequent suspensions indicate a weak and inefficient teacher. One with large governing power seldom needs to suspend a pupil. The period of suspension may be made specific or left indefinite. Experience shows that we get the best results from brief suspensions. Whenever a suspended pupil desires restoration and complies with the conditions, he is to be restored and welcomed back. Experience shows that where corporal punishment is not used more pupils are suspended, but that the good effects are largely in favour of suspension.

EXPULSION.

Expulsion severs the connection of the pupil with the school. Suspension looks to the good of the pupil as well as the good of the school, but expulsion merely removes the incorrigible. Therefore

1. *Expulsion can not be classed as a School Punishment.* "After all other means have failed, a pupil may be expelled for disobedient, refractory, or incorrigible bad conduct." Thus decides the Supreme Court of Illinois. Expulsion is not reformatory. It may be a school necessity, but it is not a school pun-

ishment. "A pupil may be expelled for gross immorality or a persistent violation of the school regulations." (School law of most States.) This law is sustained by the courts and by public opinion.

2. *Expulsion is the Act of the School Board, never of the Teacher.* Principals of graded schools and faculties of higher institutions are usually authorized to suspend the wayward and expel the incorrigible. The movement in some cities to provide special schools for these incorrigible pupils can not be too strongly commended.

3. *Expulsion is an Expedient to relieve the Schools of the Corrupt and the Unworthy.* The State quarantines against epidemics, and the school quarantines against moral pestilence. Rare, indeed, are the cases that justify this terrible punishment. Ponder long before cutting off opportunity and hope, even from the most unworthy. Act as if the unfortunate one were your own brother or sister or child.

HURTFUL SCHOOL PUNISHMENTS.

Punishments not Educative are Hurtful.—The devices of the old schoolmaster for pupil torture were marvellous. Corporal punishment in all its hideous forms—the dunce block, the gag, the dark closet, the rod, the strap, the ferule, the cat-o'-nine-tails—are but samples. But our civilization has outgrown debasing and cruel punishments, and the school "boss" with his "boss" methods has disappeared. The teacher is no longer the master, but the friend. Suffering that does not tend to work reformation is now condemned

as monstrous. But punishments not educative still linger in some schools, and hurt and do not help.

CORPORAL PUNISHMENT.

1. *Corporal Punishment is not Educative.* For this reason it must go. At the beginning of the nineteenth century it was universal and popular, but at the close of the century it has not only become amazingly unpopular, but it has virtually disappeared as a school punishment. It is not now used in our colleges nor in our high schools, nor in the first and second grades of our primary schools, nor in our kindergartens. It is rarely used in the seventh or eighth grades of our grammar schools. In the four remaining grades, as in our rural schools, its use is becoming rarer and rarer. Some countries, like France, and many cities, have abolished the rod. Public sentiment is setting strongly against the use of the rod, and with the present century corporal punishment, it is believed, will utterly disappear from our schools.

2. *Transition Period.* Grant the right but avoid the use. For half a century this expresses the prevailing attitude of educators. The author long advocated this view as many educators still do. But our advancing civilization will not much longer tolerate the use of the rod in our schools. The widest experience demonstrates that in our times corporal punishment hurts and does not help. The suffering is inflicted, and in most cases does not even tend to work reformation; it tends to alienate pupil and parent.

3. *Extreme Cases.* Some educators insist on the

retention of the rod, to be used in extreme cases. This position is admirably presented by Dr. E. E. White: "When a child rebels against the authority of the parent or the teacher, the use of the rod to compel obedience may be justifiable. Rebellion may not only justify, but may make necessary, the use of corporal punishments. When the rod is used at all, it is for the insubordinate or the rebellious. The existence of insubordination or rebellion marks the limits of natural penalties and makes a well-defined place for force." Dr. White's limitations substantially abolish the rod. Good management seeks to prevent rebellion. When insubordination actually occurs it must be overcome by wise treatment. The rod, like war, leaves all issues unsettled. Patiently, rationally, as the wise physician treats the diseased patient, so the judicious teacher treats the rebellious pupil. In these extreme cases suspension is every way a better remedy than flogging.

3. *Gradual Disuse.* Gradual abolition of the rod is best. The educational world is surely coming to agree with Dr. W. T. Harris:

"I think that better discipline can be obtained without the use of the rod than with it. I should not approve of even permitting corporal punishment in the high school.

"A word further in explanation of my somewhat conservative ground on the subject of corporal punishment. I have known the absolute and unconditional prohibition of corporal punishment to produce evil effects at first. It is better for the teacher to abolish corporal punishment than for the laws of the city to prohibit it unconditionally. There are many pupils who, through bad previous training, have come to order their lives in the fear of punishment. These pupils will demoralize a school if the practice of corporal punishment is prohibited unconditionally. But

such pupils can be provided for by suspending them from school temporarily, and restoring them only on trial or on probation. Such temporary suspension of ill-behaved pupils has the most salutary effect."

4. *The Extreme Position.* Corporal punishment is considered criminal. Col. F. W. Parker for a long time has contended for the immediate and absolute abolition of corporal punishment. He says, "I would place corporal punishment and reward giving as in the highest degree criminal." A rapidly increasing army of teachers are coming to agree with Col. Parker, and were "hurtful" substituted for "criminal" in his denunciation, many more educators would indorse his extreme position. Strange phenomena! Rational beings cling to things that hurt and do not help. The gambler clings to his cards, the drunkard to his cups, and the old schoolmaster to his hurtful practices. But reform and progress characterize civilization; we somehow outgrow the antiquated, and the old grows into the new.

FEAR-INSPIRING PUNISHMENT.

Dread, like a nightmare, depresses pupil effort. Perfect love casts out fear, and peace comes to those who trust. The Christian does not fear, for Jesus is his loving friend. The pupil does not fear, for he loves and trusts his teacher. This is the spirit of the new education. But the old schoolmaster ruled through fear, and unfortunately the boss spirit still lingers in many of our schools, and teachers often substitute other dread-inspiring devices for the dread of the rod. Who can estimate the torture occasioned by the

dread of low grades, of demerit marks, of failure in examinations? By constant harping on these cruel devices many teachers make school life a burden. Fear paralyzes effort. Teacher, your dread of non-election wastes much of your own energies, and you feel it as a cruel torture. Let this teach you wisdom. First of all study to make your pupils happy. Interest is better than dread, and leading is better than bossing.

DEGRADING AND CRUEL PUNISHMENTS.

Such punishments are monstrous. A self is greater than a world. The self ideal must be cherished to the utmost, and the pupil must be led to think highly of himself. Ridiculing and belittling a pupil is as criminal as the old-time dunce block and dunce cap. Pupil betterment is your ideal. You do well to reject with abhorrence any punishment that tends to lessen manliness and the sense of honour.

Cruel punishments are simply barbarous. Suffering in some form may be necessary to work reform, but suffering that hurts and does not help is cruel. Like the dentist, the teacher studies to avoid inflicting unnecessary pain. To place red pepper on the tongue as a punishment for whispering is an outrage. It is cruel to deprive a pupil of his recess, or to keep the weary pupil for an hour after school, or prolong an examination for three hours, or impose impossible tasks.

UNJUST PUNISHMENTS.

Often innocent pupils are condemned on circumstantial evidence. More frequently the punishment

is unnecessarily severe. Pupils are exceedingly sensitive to justice, and unjust punishments generate bitterness and resentment. *Be just*, is one of the laws of the school, and must not be violated by the teacher. It can not help even to mention the many hurtful punishments still in current use. "Everything to help and nothing to hurt" is the vital test. The earnest teacher, like the able physician, studies to find the remedy that will save.

SUMMARY.

In closing the subject of punishments it seems fitting to emphasize a few items.

First, no punishment must become customary. Order is the rule, and conduct demanding punishment is the exception. The teacher, as best he can, leads the erring pupil back to law-abiding, adapting the remedy to the case.

Second, the change from "boss" rule to law must be gradual. A teacher accustomed to govern by the rod and by marking is as helpless as an infant when he lays aside these barbarisms, and tries to control up to self-control. Bossism is better than anarchy.

Third, the teacher must not suffer too much anxiety because the pupil goes wrong. The management must lead the pupil to worry over his faults, and so reform. Nothing can be worse for the school than for the teacher to worry, and lose sleep and appetite and hope. Each case must be met calmly and hopefully. It is the pupil who has sinned and who must suffer. The teacher feels a deep satisfaction in restoring the wayward ones.

Fourth, corporal punishment must go. It must give place to rational control, for many reasons :

1. Corporal punishment is not educative. Few teachers succeed in making it work reformation. From its nature it generates bitterness and fear. It is a low incentive and does not tend to enoble. As a rule, it hurts and does not help.

2. Better discipline is secured without the use of the rod. So testify the world's educators. The appeal to high incentives

tends to easy control. The rule of the rod is beset with difficulties, and is never satisfactory.

3. Public sentiment condemns the use of the rod in our schools. Corporal punishment has been abolished in the army, the navy, and the penitentiary. Enlightened public opinion demands its discontinuance in our schools. Corporal punishment breeds trouble even when parents consent.

4. Corporal punishment hurts teacher and pupil. It unfits the teacher for understanding the pupil and for governing through ennobling motives. It unavoidably weakens his influence. One teacher in a hundred may use the rod without injuring the pupil, but to the ninety and nine it is a dangerous experiment.

5. Worst of all, the use of the rod militates against the study and use of educative motives. Teachers can make the pupils obey, and so are content. They will discuss corporal punishment, but will not discuss altruistic and duty motives.

EDUCATIVE SCHOOL GOVERNMENT.

SUGGESTIVE STUDY HINTS AND TOPICS FOR DISCUSSION.

X. Educative Governing Power.—What is meant by government? by school government? by governing power? What are the ends in school government? the agencies? the devices? Why should the teacher be qualified? authorized? sustained? Is the teacher born, or made? Is governing power a natural gift? May it be developed? What do you mean by elements of governing power? Why should you be what you wish your pupils to become? Discuss, as elements of governing power, *Character*; *Culture*; *Pupil Insight*; *Teaching Power*; *Heart Power*; *Will Power*; *System*; *Tact*; *Bearing*. Is teacher governing power the true basis of educative school government?

XI. Educative Incentives.—Explain the function of motives in the soul economy. Why must you lead pupils through motives? Show that the motive is the explanation of the act. Describe the three classes of pupils. How will you treat each? Prove that a teacher is responsible for the conduct of his pupils. Do you determine the motives of your pupils? How? Why? Is teaching the most responsible of all professions? What do you mean by educative motives? by debasing motives? Why should school

motives be helpful? Why should you root out hurtful incentives? What do you mean by hurtful motives? Show the effects of yielding to the appetites; to the passions; to selfishness. What do you mean by low motives? Why do you not use the rod? per-cent marks? rewards? prizes? What do you mean by high motives? by the highest motives? Describe the royal egoistic motives; the highest motives. Through what motives do you lead your pupils? Why do you rely most on the sense of duty? How do you develop the duty habit? Describe the battles of the motives.

XII. Educative Regulations.—Is your school an embryo republic? Do you govern up to self-government? Compare the boss, the goody-goody teacher, and the true teacher. Why should school regulations be educative? positive? general? practical? popular? Explain the law of quietude; of regularity; of promptitude; of propriety; of duty. Describe your method in enacting the school code. Give some of the advantages of getting the pupils to help make the laws. Why do you have the code approved by the school board?

XIII. Educative Law-abiding.—Will the plan of securing good conduct through self-imposed laws mark an educational epoch? Show that order is cheerful law-abiding. Compare the boss enforcing his rules and the true teacher leading his pupils up to self-government. Give your method in educating your pupils to work quietly; to be regular; to be prompt; to act properly; to do right. Why do you look well to securing the most helpful conditions? Show the influence of example; of precept; of training. Why do you count moral culture the educational superlative?

XIV. Educative Punishments.—Show that punishment is a moral necessity; that it is a remedial agency; that it works reformation. State the philosophy of punishment. Why should school punishments be educative? reformatory? consequential? just? mild? rare? What is meant by helpful school punishments? What cures? Show how wayward pupils are helped by silent disapproval; by general reproof; by private reproof; by public reproof; by deprivations; by suspension. What can you say about expulsion? What do you mean by hurtful school punishments? Why do you oppose corporal punishment? fear-inspiring punishments? degrading punishments? cruel punishments? unjust punishments? State the four items in the summary; discuss the five reasons for discontinuing the use of the rod.

PART IV.

PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS MANAGEMENT AND CLASS WORK.

CHAPTER XV.—PUPIL IMPROVEMENT THROUGH SKILFUL CLASS ORGANIZATION AND CONTROL.

XVI.—PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS METHODS AND DEVICES.

XVII.—PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL AND CLASS TACTICS.

XVIII.—PUPIL IMPROVEMENT THROUGH BLENDING OF ORAL AND BOOK CLASS WORK.

XIX.—PUPIL IMPROVEMENT THROUGH GOOD TEACHING IN LIEU OF EXTRANEous INCENTIVES.

XV.
THE CLASS
AND
CLASSIFI-
CATION.

I. School evolution.	{ 1. Individualism. 2. Classification.	{ 1. True class. 2. Fitness the test. 3. Adapted work. 4. Size of class. 5. The heart, school life. 6. Advantages.
II. The class		
III. Class hygiene.		
IV. Happy class control.	{ 1. Unite the schools. 2. Rural schools. 3. Graded schools. 4. High schools.	
V. Scheme for classification.		

XVI.
EDUCA-
TIVE
CLASS
WORK.

VI. Classifying.	{ Criteria. Tentative. Promotion and demotion.	
I. The recitation—	Class work.	
II. Characteristics of	{ 1. Spontaneity. 2. Concealing. 3. Review. 4. Lesson plan. 5. Drill. 6. Prereview.	
III. Class methods.	{ 1. Unity. 2. Individual. 3. Investigation method.	{ 1. Teaching question. 2. Conversation. 3. Topic. 4. Discussion. 5. Lecture.
IV. Class devices.	{ 1. The class. 2. Written work. 3. Laboratory work. 4. Diagrams. 5. Reporting. 6. Teaching. 7. Concert work. 8. Original devices.	

XVII.
CLASS
TACTICS.

I. School and class tactics.	Objects.
II. Principles	fitness, uniformity, economy.
III. Electric clock ; signals ; movements.	
IV. Calling and dismissing school.	
V. Calling and dismissing classes.	
VI. Fitness in class tactics.	
VII. Fitness in board tactics.	
VIII. Fitness in concert tactics.	
IX. Gains by sensible tactics.	

XVIII.
ORAL AND
BOOK
WORK.

I. The old education; the new education.	
II. Proportion of oral and book work in	{ 1. Primary. 2. Intermediate. 3. High school. 4. College.
III. Oral and book work in—	{ 1. Conduct. 2. Literature. 3. Science. 4. Mathematics. 5. Art. 6. Objects. 7. Story. 8. Illustration. 9. Example. 10. Assigning lesson. 11. Prereview. 12. Book study. 13. Book—class work.
IV. Oral teaching.	
V. Book teaching.	

XIX.
GOOD
TEACHING.

I. Written recitations, in lieu of test examinations.	{ 1. Educative. 2. Occasional. 3. Helpful. 4. All-sufficient.
II. Good teaching in lieu of marking.	{ 1. High incentive. 2. Effective. 3. Sufficient. 4. Economic.
III. Educative records and reports.	{ 1. Attendance. 2. Conduct. 3. Scholarship. 4. Reports.
IV. Promotion and graduation.	{ 1. Follows satisfactory work. 2. Elementary certificate. 3. High-school diploma. 4. College diploma. 5. No marking; no test examinations.

PART FOURTH.

PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS MANAGEMENT.

CHAPTER XV.

THE CLASS, AND CLASS CONTROL.

School Evolution.—Popular education is modern. True, some beginnings had been made in other times, but at the opening of the nineteenth century the nations had not yet entered upon the work of educating the masses. Those of us who have lived in the schools for four or five decades have been a part of our school evolution from its crude beginnings up to its highest stage of development. As pupils we began with the stage of individualism and advanced to the stage of classification; and as teachers we began with the stage of gradation and are advancing in the stages of specialization and department teaching.

1. *Individualism.* This was the first stage in school evolution. The people created the schools. The young were grouped and placed under masters. Each group of pupils with its master was a school.

The master was boss and was infallible. Each pupil was given his task and was called up to say his lesson. That was all. For one or two years the child puzzled over the alphabet and said his A B C's. For two or three more years the child puzzled over the mysteries of the spelling book and said his spelling lessons. This was all ; no reading, no object lesson but the ferule, no music but the rod. The older pupils were given tasks in reading, in writing, and in ciphering, and were sometimes called up one by one to say their lessons. Individualism was the characteristic of the earliest stage of school evolution.

2. *Classification.* This was the second stage in our elementary school evolution. Some daring teacher ventured to group his pupils into classes ; he was speedily dismissed. The teachers and the pupils bitterly opposed the innovation. It was well enough in college, but it would never do in common schools. But the young men who had been to college favoured classification. They showed that classification enabled the teacher to do tenfold more work. Slowly classification worked its way into all our schools and individualism disappeared. Occasionally we still hear some belated teacher cry, " Back to individualism ! " But, from the nature of true evolution, all that is good in the old reappears in the new. Individualism as a phase of school work has disappeared forever, but the helpful treatment of the individual pupil permeates all approved school work. Classification is the characteristic of the second stage of school evolution.

THE CLASS.

In the school sense, a class is a group of pupils who can work together. In our ideal class the pupils are of equal attainments and of equal ability. At the best, we must be content to approximate our ideal, and in classifying we must substitute similar for equal; the one safe test is, ability to work together. Can the pupil do with greatest profit the work of the class?

1. *Pupils are grouped to facilitate Work.* Ability to do the work is the test. A true class is a group of pupils prepared to work together. The pupils in a class may differ in attainments, in ability, in age, but they must be able to work together. Pupils who can do well more advanced work are promoted, and pupils who can not do profitably the work of the class are dropped to a lower class. We think of a class as a company of fellow-workers interested in the same subjects and capable of moving forward together. To place or keep a pupil in a class too high or too low for him is weakness and not kindness.

2. *The Work of the Class is adapted to the Pupils.* We place in a class the pupils best prepared to work together; still we find we have in the class three grades—bright, average, and slow pupils. We plan the work of the class with reference to the average pupils, usually two thirds of the class. We give the bright pupils, one sixth of the class, additional work, and promote them as it is found best. The slow pupils, about one sixth of the class, interest us. Though dull, they often have good stuff in them. We study each one. We spare no effort to interest and stim-

ulate these pupils. We give them the minimum amount of work to do. Most of them are led to do reasonably good work. When it becomes evident that one of these can not profitably work with the class, he is dropped to a lower one.

3. *Medium sized Classes are most desirable.* From ten to thirty pupils constitute a satisfactory working class. When a class in our elementary or high schools exceeds thirty, it should, if possible, be divided. Classes of less than ten pupils may safely be combined. We find it true educational economy to keep our classes within efficient working limits. In some subjects much is gained by combined recitations; in other studies we can accomplish most by dividing a class into sections. In all cases individual teaching characterizes good class work. The teacher must study to keep in vital touch with each pupil.

4. *The Class is the Heart of School Life.* In it and through it flow the warm currents of educative life. Here teacher and pupil are at their best. The united effort to master the subject creates enthusiasm and develops power. Each pupil does his best. Like the skilful general in the battle, the teacher encourages and manages; but the pupils, like the soldiers, do the work. In the class the pupils learn how to study, how to find out from Nature, how to find out from books, and how to express.

5. *Classification is vastly better than Individualism.* The greatest thing the race has done or can do is the creation of schools for all. Even in the stage of individualism the school was invaluable, for somehow pupils learned to read and write and cipher.

But classification was an immense improvement. It carried over into the elementary schools what had proved so helpful in the higher education. The class multiplies the teacher by ten or even by twenty. The teacher with the class works with power impossible with one pupil. The pupils gain most by the class. Investigating together utilizes the potent agencies—interest, sympathy, generosity, generous emulation.

HYGIENIC CONDITIONS OF EDUCATIVE CLASS WORK.

The successful teacher looks well to the hygienic conditions of educative class work. (1) Pupils must form good hygienic habits. Perfect health is the basis of achievement. (2) Pupils must breathe pure air of the proper temperature. Vitiated air and abnormal temperature remarkably reduce the efficiency of class work. (3) Pupils must work in the light. Cheerful, well-lighted schoolrooms are astonishingly helpful. (4) Pupils must change positions frequently. Now they stand and now they sit; now they work at the board and now they do seat work. Young persons soon grow restless, and movement is a school necessity. (5) Pupils must be made happy. There is interest and delight, and all are glad when the time comes for class work. Fear and grades and mere mechanical work are not thought of. (6) Teacher and pupils must be kept fresh by the hourly recess; no other hygienic device is of equal value in school work. Good hygienic conditions multiply the working power of teacher and pupil and render control comparatively easy. The stupid teacher drudges on

and does not stop to think of the hygienic conditions of success.

HAPPY CLASS CONTROL.

Educative control conditions the best teaching. Attention through interest is fundamental. Intelligent and vigorous teaching is the secret of easy control. Not a moment is wasted. Each pupil is enlisted in the lesson, and is led to do his best. Rules are not needed. All look to the teacher as their leader. Desire to ask or answer a question is indicated by raising the hand. No one thinks of communicating except through the teacher. There is no excuse for disorder, nor is there time to reprove disorder during the recitation. A disorderly pupil is quietly but promptly excused from the class, and the work is not interrupted. Later, the unfortunate disturber is kindly disciplined. Each pupil grows into the habit of good conduct and vigorous work. It is a great thing to secure the earnest effort of each member of the class to master the lesson and also help others to master it. Quiet is essential, but mere silence is not good order; earnest work characterizes good class control. The art of happy class control tests to the utmost the skill even of the most gifted teacher. Few preachers can hold the attention of an audience for half an hour; it is vastly more difficult to hold the interested working attention of a class of restless pupils; to do this the teacher must be intensely in earnest and must understand his pupils, his subject, and his art. Control is easy and happy when pupils are kept interested and busy.

SCHEME FOR CLASSIFYING SCHOOLS.

The problems relating to the class are of profound interest. Here, as everywhere, we must build on the experience of the race; but with all the lights of the past and all the helps of the present, each one, from necessity, must work out these problems anew. The teacher is an artist, not merely an artisan. The aim in these chapters is to develop principles rather than rules, and to suggest better ideals rather than to teach specific methods. Our faith in the earnest teacher is simply boundless.

School classification has been satisfactorily worked out in our times. With no other phase of our school work are we so well pleased. The scheme so ably worked out seems worthy of universal acceptation. The aim is to unify the educational work from the kindergarten to the university.

1. *The Rural School.* The typical rural school is ungraded. There is one teacher, and the pupils are of all elementary stages of advancement. The work includes that of our primary and intermediate graded schools. The scheme of classification wisely harmonizes the work of ungraded and graded schools. The elementary period is eight years—from the sixth to the fourteenth year of pupil life. No attempt to shorten the time is likely to prove satisfactory. The pupils in the rural schools are grouped into four classes, each class doing two years' work. Class D includes the pupils from six to eight; class C, the pupils from eight to ten; class B, the pupils from ten to twelve; class A, the pupils from twelve to fourteen.

In the real school the ages vary, but these are working averages. Each class includes two grades. (See *Rural Schools*, Chapter XXI.)

2. *The Graded School.* The pupils are arranged according to advancement into eight groups called grades. In the typical graded school there is a teacher for each grade. The pupils in a grade do a year's work, so the grades and the years correspond; thus Grade I includes the pupils doing the first year's work, and Grade VIII includes the pupils doing the work of the eighth year. Each grade includes two classes, the beginners in the grade (class b) and the advanced pupils (class a). Here and everywhere a class means a group of pupils who work together. (See *Graded Schools*, Chapter XXIII.)

3. *The High School.* The course extends through four years, and the pupils are grouped into four divisions corresponding with the years and designated by the letters D, C, B, and A. These groups are arranged in classes of twenty pupils, more or less, and designated as class D¹, class D², class D³, etc.; class C¹, class C², class C³, etc.; class B¹, class B²; class A. The scheme is so practical that it tends to become general. (See *High Schools*, Chapter XXV.)

4. *Educators plan Simplicity, Uniformity, Unity.* Our schools are the schools of the people, and hence demand that the scheme of classification be simple and the nomenclature easy. We so plan that our ungraded schools may be readily transformed into graded schools. We so plan that pupils may, without a break in their work, pass from an ungraded to graded schools, or from one graded school to any other graded

school. We so plan that the pupil, without a break, may pass up from class to class from the kindergarten to the university.

CLASSIFICATION OF THE PUPILS.

This problem is ever with us. Of all organic school work, this is the most difficult and the most important. Mistakes here mar lives. We find it easy to master the scheme for classification, but we never find it easy to classify our pupils. Classification is strictly professional work.

1. *Criteria.* We study each pupil as the physician studies each patient. Heredity, temperament, physical abilities, mental abilities, moral habits, and attainments in the leading studies are carefully considered. The vital question is, *Can this pupil work most profitably with this class?* In view of all the conditions we decide. Like all artists, we find our work extremely perplexing at first; but as the years go by we gain intuitive insight and acquire skill.

2. *Tentative.* After all, class work is the ultimate test. It is important to place the new pupil in the right class at first, but it is always the safe course to try him before deciding. Our tentative classifications must necessarily be more or less hasty; but when we observe the pupil at his work, we deliberately determine his place. From day to day we promote and demote pupils as we find best, and so reach, in some degree, permanent classification.

3. *Promote and Transfer.* The teacher's work is never done. Classification goes on forever. A true class is a group of pupils who can profitably work

together. Whenever we become satisfied that a pupil can work more profitably with a higher class, we promote him ; or we transfer him, when we find he can do better, to a lower class. We make these changes as quietly as Nature works. Before the time comes for class promotion we shall have made all desirable changes, and the class as a class will become a higher class. This is ideal, but it should be made a reality by every progressive teacher.

CHAPTER XVI.

PUPIL IMPROVEMENT THROUGH EDUCATIVE CLASS METHODS AND DEVICES.

WE build on the achievements of the race. We study to make our class work exceedingly fruitful. We learn valuable lessons in class work from Jesus, from Plato, from Pythagoras, from the Rabbi, from the Jesuit, from gifted teachers of all ages and lands. We enrich our own experience in class work by all experience. In all the light, as best we can, we plan and do our class work.

The Recitation.—This expression is a heritage from the old schoolmaster. To him, class work was literally reciting ; the pupil committed the words of the book and recited the lesson. The new education retains the expression but gives to it a new meaning. In general, we use class work and the recitation as synonymous expressions ; but specifically, the recita-

tion includes class work conducted by the teacher. The teacher directs laboratory work and the studies of the several pupils, but this is individual rather than class work. We speak of the recitation period, the recitation plan, the next recitation, the previous recitation, for we find these expressions most convenient.

Class Work.—Whatever the class does as an organism is termed class work. In its elements the class is composed of the teacher and the pupils. For working purposes the pupils are grouped into sections, number one in each group being section leader. Roll call is instantaneous as the section leaders report absentees. Like a well-organized army the class is always ready for action. The teacher is the class leader. What do you consider good class work? What are the characteristics of the efficient recitation? What do you understand by good class methods? What do you mean by helpful class devices?

CHARACTERISTICS OF EFFICIENT CLASS WORK.

We study the class work of many successful teachers, and gain insight into the nature of the well conducted recitation. Some characteristics of fruitful teaching impress us.

1. *Spontaneity.* Teacher and pupils study as best they can the lesson topic. The teacher plans the recitation as carefully as the general plans the battle. Still the ideal recitation is a marvel of spontaneity. Teacher and pupils enter into the investigation with the freshness and zest of original explorers and real artists. Investigation and creation supplement each other.

The recitation, like the poem, is an original creation. It is this spontaneity that sustains unflagging interest and inspires teacher and pupils to surpass themselves. Arnold spent hours preparing a Latin exercise that he had taught annually for thirty years, but he taught the lesson as if it was for the first time. The real teacher, like the orator, is always fresh and inspiring. Spontaneity characterizes good class work as drudgery characterizes machine work. Constant surprises keep the teacher and the pupils alert and happy.

2. *Revealing and Concealing.* God reveals a little and leaves man to find out the rest. Jesus taught a few truths and wisely left us hungering and thirsting for more. The great preacher unfolds one or two truths, but awakens a burning desire to know all truth. The discreet teacher conceals from view the boundless continent, that he may lead his pupils to explore the small island. It is a great art to open truth to the learner little by little. The novice tells all he knows, but the wise teacher conceals all but the one thing needful. Agassiz so taught one thing as to inspire his pupils to find out many things. Revealing is well, but concealing is better. We learn a great lesson from the microscope; the teacher conceals that he may the better reveal. Concealing the boundless fields of knowledge and revealing truth little by little characterizes good class work. "The art of teaching a little," said Huxley, "depends on knowing a great deal, and that thoroughly."

3. *Review and Recapitulation.* Isolated ideas are worthless, but related truths are golden. At each step

the learner is led to apperceive as well as perceive. The present lesson builds on previous lessons. Before beginning the new lesson the pupils recall in brief the results heretofore reached, and the new lesson is worked out in view of past lessons. Then, at the close of the recitation, the points made in the lesson are recapitulated, that they may be firmly grasped and readily reproduced. Like the oration, the recitation has its exordium and its peroration. Like the essay, the recitation has its introduction and its summary. The review and the recapitulation characterize good class work.

4. *Lesson Plan.* As the general plans the battle, so the true teacher plans the recitation. The aim is mastery through concentrated and well-directed effort. All educative work is systematic work. The main points are isolated, mastered in detail, recombined. By examples and illustrations and comparisons and applications the pupils are led to fully grasp the points. Other studies are made contributory, but nothing, even for a moment, is permitted to divert attention from the lesson. The questions and stories and discussions and allusions, from start to finish, are made to contribute to the mastery of the lesson. As defeat awaits the commander who fights without a battle plan, so failure awaits the teacher who meets his class without a lesson plan. Only one teacher in twenty wisely plans the lessons, and only one teacher in twenty does masterly class work. As the result of this criminal neglect, the waste of pupil energy is appalling. The skilful lesson plan characterizes good class work.

5. *The Drill.* "Repeat without ceasing" was Jacotot's golden rule. The dynamic factors of mastery are attention, interest, doing. The new is constantly assimilated with the old. A little truth gained is applied in many ways. Doing supplements knowing and telling. The learner repeats and repeats until he feels the spirit of mastery; but repetition is never mechanical memory; the repetition is ever in new forms. Problem after problem is solved and explained. Example after example is given. The drill is incalculably helpful. It gives the pupil courage and strength and skill to advance. As the teacher gains teaching insight he drills his pupils more and more. This is what is meant by thorough work. The efficient drill characterizes good class work.

6. *The Pre-survey.* The lesson *assigned* is the measure of teaching skill. In nothing is the wise teacher more painstaking than in assigning lessons. The lesson to be assigned has been carefully considered. How much can the pupil do well? The pre-survey prepares pupils for successful study. Two or three minutes are spent in a pre-examination of the lesson topic. An interest in the new lesson is awakened and helpful suggestions are given. In all classes below the college the pre-survey is necessary to the best class work. The helpful pre-survey characterizes good class work.

EDUCATIVE CLASS METHODS.

These are effective ways of doing class work. The aim is culture through mastery. The recitation plan must first of all be grounded in principles. Teaching

as an art is rooted in education as science. Educational laws guide the educator. Skilful adaptation is cardinal. A sound plan of class work that thoroughly enlists the pupils and fully utilizes teacher and pupil effort may be counted a good class method.

Class methods are systematic plans of class work. The prepared teacher works out well-considered plans. We speak of special class methods, but we always think of class methods as the ways of doing class work. The teacher blends into harmony good methods and helpful devices.

1. *Unity Method.* Unity through law is fundamental. Amid endless diversity there is marvelous agreement in the essentials. The processes of teaching and learning are ever the same. Perceiving and apperceiving, discriminating and assimilating, analyzing and synthetizing, induction and deduction, enter into the warp and woof of learning and teaching. Development of power through the acquisition of knowledge is the common purpose. Great principles give unity to class work. Leading pupils to apperceive their acquisitions and thereby unify them is the very essence of good class work.

2. *Individual Method.* The teacher studies to understand each pupil. He does his best to bring out the individuality of each member of the class. Everything is made to contribute to the unfolding of the individual pupil. In class work each genuine teacher works in his own ways. In all the world we do not find two true teachers pursuing the same class methods. A true recitation is a new creation. Pupil betterment is the test. Each teacher constantly asks

himself, What are the best ways to elicit the best efforts of each pupil? Class methods which thoroughly enlist each pupil in the class work are highly educative.

3. *Investigation Class Method.* The teacher systematically leads pupils to find out. The class, led by the teacher, investigate, search for truth. All research, all experimenting, all explaining, all laboratory work, all efforts to find out and understand, are included in the investigation class method. Good class methods are good ways of investigating. All educational progress, all teaching plans, all helpful class devices, and all teaching facilities, are included in this all-comprehending investigation method. Teaching plans are ways of investigating. These plans may be grouped as the teaching-question plan, the topical plan, the discussion plan, the conversational lecture plan, and the lecture plan. The ideal recitation skilfully combines these ways of investigation.

4. *The Teaching-question Method.* By skilful questioning the teacher leads the pupil to find out for himself. Socrates so questioned as to incite and lead the investigator to discover truth. The Socratic question is the teaching question, and is sometimes called the Socratic method or the teaching-question method. The following incident, adapted to our environments, is a good example:

Meno. "Socrates, we come to you feeling strong and wise; we leave you feeling helpless and ignorant. Why is this?"

Socrates. "I will show you." Calling a young Greek, and making a line in the sand, he proceeded: "Boy, how long is this line?"

Boy. "It is a foot long, sir."

Socrates. "How long is this line?"

Boy. "It is two feet long, sir."

Socrates. "How much larger would be the square constructed on the second line than on the first line?"

Boy. "It would be twice as large, sir."

Under the direction of the boy, Socrates constructs the two squares.

Socrates. "How much larger than the first did you say the second square would be?"

Boy. "I said it would be twice as large."

Socrates. "How much larger is it?"

Boy. "It is four times as large."

Socrates. "Thank you, my boy: you may go.—Meno, that boy came to me full of confidence, thinking himself wise. I told him nothing. By a few simple questions I led him to see his error and discover the truth. Though really wiser, he goes away feeling humbled."

The teaching question elicits attention, awakens interest, and guides effort. It gives the learner the pleasure of discovering the truth. The teacher and pupil investigate together, but the pupil finds out for himself. The teaching question, though older than Socrates, is a striking characteristic of the new education. The true teacher so questions as to lead the pupil to find out what he does not know, but the schoolkeeper so questions as to lead the pupil to repeat what he already knows. The teaching question is one of the best features of helpful class work, while the old question-and-answer method is one of the worst.

5. *The Conversation Method.* Genuine teaching is largely conversational. This form of class work unifies teacher and pupil effort to find out. The best oral teaching is conversational. The story, the conduct lesson, and the oral science lesson are mostly conversational. Pupils are led to contribute all they

know, and to ask about the new lesson. At every step the pupils work with the teacher. The conversation includes the teaching question, but it also imparts information to prepared pupils. Teacher and pupils investigate, examine, talk over the matter, ask, and answer. The conversation must never degenerate into a monologue. The great art is to get the pupils to enter heartily into the conversational investigation.

6. *The Topic Method.* In this method the class investigate systematically. The lesson topic includes several subtopics which are examined one by one. The topic method includes the teaching question, the conversation, and the discussion methods. One or two pupils tell what they know about a subtopic, after which the class examine the topic. When used judiciously the topic method may be made the basis of systematic class work, but its exclusive use is fatal to educative work. Mere topic work excludes investigation, and admirably suits the schoolkeeper, for it excludes teaching. The true topic method involves all the other methods of investigating.

7. *The Discussion Method.* This is the method to develop power. The world needs oaks rather than willows. Discussion develops a sturdy manhood. The class investigate together. In brief speeches the pupils present and defend their positions. Nothing arouses greater interest or calls forth more vigorous effort than well-directed discussion. The discussion tends to develop vigorous thought and independent expression. As iron sharpens iron, so discussion sharpens mind. The Jesuits used this method in develop-

ing an army of mighty men. Educationally, discussion stands very high. In these mental conflicts the utmost power of the pupil is put forth. He acquires cogency of thought and vigour of expression. He learns to respect the positions of others, and at the same time to manfully maintain his own. There is no better way to cultivate independence, self-assertion, liberality, and the habit of treating an opponent courteously and fairly. The discussion, from the primary to the university, may be made helpful; it does most to abolish stupidity and indifference in class work. The teacher so manages the discussion as to develop the spirit of investigation rather than the spirit of victory. A weak teacher does well to prohibit discussion. The strong teacher uses the discussion method judiciously, and finds it a tremendous educative force.

8. *The Lecture Method.* The learners think with the lecturer. The living teacher leads the research, giving information and inspiration. The lecture method instructs. Through the centuries the lecture has been a marvellous educative means. We think of Aristotle and Kant and Jesus as teaching by lectures. These masters combined the conversation and lecture methods. Surely the lecture has its place in class work. Where? Not in the elementary; not usually in the high school; not usually in the freshman and junior college classes. Elementary pupils are not prepared to profit by lectures. The true elementary oral work is the conversation, and not the lecture. High-school pupils are trained to think with the lecturer, and the occasional lecture proves highly bene-

ficial ; but the lecture is not the form of high-school educative class work. As a rule, the freshman and sophomore college students are hurt and not helped by the too frequent lecture. The occasional lecture or course of lectures in some subjects do great good, but thorough teaching during these precious years is imperative. The place for the lecture in class work is in the junior and senior college classes, in the graduate work, and in the professional schools. The advanced students think with the lecturer as he leads them into fields of research and into the realms of philosophical investigation. But even in the advanced work the lecture must be supplemented by good teaching.

HELPFUL CLASS DEVICES.

These are expedients for improving class work. The careless teacher sometimes speaks of these helps as methods. We think of fundamental and guiding truths as educational principles ; of systematic plans of school work as methods ; and of temporary expedients as devices. The ingenious teacher pursues systematic methods, but uses countless devices. We think of the topic plan of class work as a class method, but we think of blackboard work as a device. We rejoice in all helpful school devices, but we deprecate mere novelty, and condemn pretentious but uneducative devices. A few approved devices will serve as suggestions.

1. *The Class.* This is a device to economize time and energy, to utilize the group forces, and to foster the habit of working with others. But the class does not sink the individual in the group. Each pupil

must be as well cared for as though the instruction was to him alone. This is often overlooked. The superficial teacher addresses the class as a whole; if there is a fair amount of attention he is satisfied. This is a fatal mistake. The class must not be dealt with as a compound, but as an organism made up of individuals. It must be dealt with as a skilful florist deals with his plants, where each plant has the culture it needs, to the manifest advantage of the whole.

2. *Written Work* supplements oral work. In school and college, in our times, about one third of the class work is written work. When at the board, it is board work; when at the seat, it is tablet work. The writing tablet has supplanted the slate. Studying or reciting, the pupil finds constant use for the tablet. The gain by this device is immense. All members of the class work. But there is danger here. Real teaching must always be mainly oral, and must be supplemented by written work. Written work is a leading class device, but must not be carried to extremes.

3. *Laboratory Work*. Learners are led to gain knowledge first hand. Laboratory work has become a marvellous educative device, entering as it does in some form into nearly all school work. It is used to include all work in which the pupils individually seek truth through observation, measurement, and experiment. In class laboratory work the teacher directs the investigation, and all concentrate on the study of one thing. Each pupil will, when possible, do individual work. One experiment made by the pupil helps more than a score made by the teacher. Laboratory work is a

most helpful class device, and must be used to supplement all forms of efficient teaching.

4. *Outline Work.* This device systematizes class work. After a subject has been mastered in detail, it is reviewed in outline. The diagram is the last synthesis. The outline aids memory and enables the learner to grasp the subject as a whole. It leads to the mastery of essentials and the omission of burdensome details. But the outline is merely a device. Pupils starve when fed on skeletons. We begin with the concrete, and work up to classes, definitions, rules, principles, diagrams. We begin with particulars and work up to outlines. Modern text-books rightly place the outline at the close of the subject. To begin with diagrams, to teach from diagrams, and to depend upon diagrams are fundamental educational errors. The outline wisely used is an excellent class device. The teacher leads the pupil up step by step and then the steps are outlined. The pupils make the outlines.

5. *Reporting Work.* This device leads to research. In every class we have bright pupils who are able to do extra work; we manage to have these pupils prepare interesting reports bearing on the work of the class. It is a valuable device to appoint a pupil to examine and report on a topic connected with the lesson. These reports are brief, but interesting. They are in the line of original research, and help the pupil and the class.

6. *Teaching Work.* This device multiplies individual effort. The topic has been thoroughly investigated, but the pupils need the drill. The class is divided into groups of two or more each, and the

pupils in a group in turn act as teacher of the group. For large classes this is a valuable artifice, as it greatly multiplies individual work. In normal work it is found to be an admirable device for practice teaching in advanced work. The wide-awake teacher will use teaching work sparingly, but will never rely upon it. Nothing can take the place of individual teaching. Teaching work breaks up monotony and is admirable for drill. Teaching is remarkably educative; all pupils take delight in teaching. Teaching work often does more to interest pupils than any other device. However, we must keep in mind that this is merely a temporary expedient to be used occasionally.

7. *Concert Work.* This device enlivens the recitation. Class work sometimes drags. Concert work, used occasionally, arouses the pupils. The members of a section or of the entire class answer together. To overcome timidity, to quicken the interest, or to fix a fact, this device may be used sparingly. We use it most with young pupils; as the pupils advance we use it less and less. In some subjects concert work affords a valuable drill. It may be advantageously used to a limited extent in all classes, but especially in oral work. The exclusive concert method is a sure cure for study and for thorough teaching. Concert teaching is showy but shallow, and is favoured by "fuss-and-feather" teachers. The honest teacher will use the concert method sparingly and judiciously.

8. *Original Class Devices.* Numerous other devices are of great value, but there is danger of perplexing the young teacher. The orator, while speaking, never thinks of the principles of elocution or of the

intonations of his voice. The artist seems inspired, but hard work is the source of the inspiration. While teaching, the educational artist seldom thinks of principles or methods or devices. Having mastered these in detail, he intuitively pursues the method and uses the device best suited to his purpose at the time. He is the master of some methods and many devices, but the slave of none. From time to time he uses such as he deems most helpful. He often thinks of the story of David and his sling, and relies most on his common sense. He finds that one of his own devices to meet conditions is of more value than many second-hand devices.

CHAPTER XVII.

PUPIL IMPROVEMENT THROUGH HELPFUL SCHOOL AND CLASS TACTICS.

By school tactics is meant a system of signals and movements adapted to school work. The object is to promote order and orderly habits and facilitate work. Suitable school and class tactics save time, improve the symmetry and spirit of the school, and train to habits of prompt and exact obedience. The wise teacher uses with judgment sensible school tactics.

Principles determine Signals and Movements.—The *fitness* should be obvious to the pupils. Everything to help and nothing to hurt is the cardinal principle. All required movements should be *necessary*. Changes are made with the least *expenditure of time*.

and energy consistent with fitness. Signals should be few. No time or energy should be wasted on the purely mechanical. Numerous signals confuse and squander the energies of teacher and pupils. Signals should be specific. Words of command are usually best in class work. Gentle bell taps are the best signals for movements. Our school tactics should be *uniform*. Much will be gained in school, as in military tactics, by general uniformity. Variety in teaching but uniformity in tactics is a school desideratum. Words of *command* should be given in a low, firm tone. Commands given in a thin, faltering tone and with the rising inflection cause the pupils to smile and hesitate. Good elocution commands respect and obédience. Movements must be *executed* quickly, quietly, and with precision. Noisy, dilatory, slovenly movements are distressing, and result in bad habits. The greatest freedom consistent with good order should be permitted during movements. Pupils are trained to behave properly at all times, but liberty is the very life of the school. The martinet who requires pupils to march with folded arms, closed lips, and solemn looks should be a trainer of monkeys.

The Electric Programme Clock is a Serviceable Help.—It relieves the teacher of the time strain and secures absolute regularity in school work. The clock taps a bell in each room three minutes before the close of the recitation period and at the close. Time is thus given for closing the lesson and for the presurvey of the next lesson. The programme clock thus aids in school management. One clock regulates the whole school, however large, ringing any num-

ber of programmes. In many of our best schools the electric programme clock calls and dismisses all classes, and calls and dismisses school. "*Books!*" the cry of the old schoolmaster, is no longer heard in the land.

We study Economy in calling and dismissing School.

—All school buildings should be constructed in view of quick entrance and exit, so that the school can be easily called or dismissed within two minutes. In large schools it seems necessary to have the pupils form in line, but in small schools, and in all schools above the primary, pupils can soon be trained to assemble orderly without this device. The plans for calling and dismissing school vary with the circumstances. The one essential is that there shall be good order. The clock taps the bell; two minutes are given for assembling. At the end of this time all are required to be in places and the clock signals work; pupils not in places are tardy. This plan works well in all schools from the primary school to the university.

We study Economy in calling and dismissing Classes.

—The clock taps bells; instantly the pupils rise, turn, and pass to recitation places. In the absence of the signal clock the call bell is used. The teacher so plans that the pupils move without confusion. Much skill in planning the movements is necessary in large schools. The electric bells tap three minutes before the close of the recitation and at its close. At the closing signal the pupils instantly rise, turn, and move to seats in assembly room or to playgrounds. Soon pupils may be trained to move with precision and grace. This is

the perfection of school tactics. The signal clock for rural schools is inexpensive but invaluable. It rings a bell on the playgrounds and taps a bell in the school-room.

We study Fitness in Recitation Tactics. A true class is a group of pupils who can work together. The best class tactics waste no time or energy. Teacher and pupils get to understand each other and learn to work together. The teacher leads in the work, and directs by a few easy signals the movements of the class. In school tactics signals include words of command as well as mechanical devices. The old schoolmaster called the pupils consecutively. He began at the head of the class and proceeded to the foot. "*Next!*" was his one signal. The old-time professor arranged the names alphabetically and called on the pupils as the names occurred on the roll. We remember the dear old man and the tricks we used to play on him. The modern teacher treats the class as a unit; each pupil does all the work. When a problem is given or a question asked, each one thinks and then raises the hand. Some one is called and hands are dropped, but any pupil may be called on at any moment. All are wide awake. Pupils raise hands to answer, to criticise, to ask. But no one can specify; each teacher pursues his own course. You manage your class in your way.

We study Economy in Blackboard Tactics. When called to the board pupils await signals. At the signal "*Board!*" each pupil turns to the left. At the signal "*Attention!*" each pupil faces to the right. At the signal "*Erase!*" the pupils turn to the board and

erase by moving erasers down. At the signal "*Write!*" each pupil takes a crayon and proceeds as directed. These are the sensible signals used in nearly all our schools. Movements are orderly and graceful, and much time is saved. As the crayon troughs are covered with wire gauze, and as the pupils are trained to move the erasers downward, no one is annoyed by crayon dust.

We study Fitness in Concert Tactics.—Pupils respond when called on; otherwise no one speaks. Nearly all class work is individual, but occasional concert responses help. At the signal "*Class!*" all respond in concert. At the signal "*Boys!*" only boys respond, and at the signal "*Girls!*" only girls respond. Teaching work, to a limited extent, is remarkably helpful. The class is divided into groups of two or more pupils each; at the signal "*Ones!*" the ones act as teachers and the others in the group as pupils; at the signal "*Twos!*" the twos act as teachers and the others as pupils. The signal "*Attention!*" closes the exercise.

Each Teacher studies Well a System of School Tactics.—The informal teacher manages to have considerable freedom, but it is not the freedom of law. The informal school always impresses us as a disorderly school. A few hours of faithful study and a few weeks of careful practice will enable even inexperienced teachers to master helpful school tactics. Soon you can work easily and vigorously. The tone and appearance of your school will improve, and your efficiency as a teacher will be largely augmented.

CHAPTER XVIII.

PUPIL IMPROVEMENT THROUGH EDUCATIVE ORAL AND BOOK WORK.

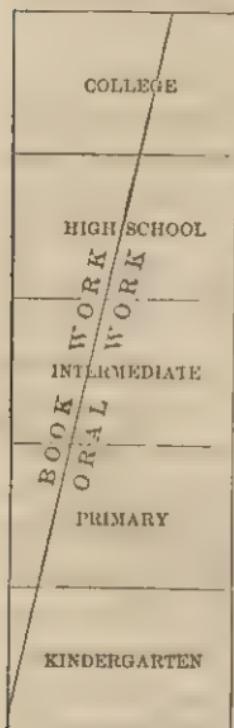
We think of the Old Education as Bookwork.—So many pages were assigned for a lesson and so many pages were recited. The pupils studied the book and the teacher heard them recite the book. "Take the next lesson," was the stereotyped form of assigning work. The college professor interpreted the book or substituted the lecture for the book. Mechanical bookwork very largely characterized the old education. Learning and not development was made primary.

We think of the New Education as combining Oral and Book Work. Intelligent bookwork is preceded and accompanied by oral work. The pupil works face to face with things, and gains knowledge first hand. From the kindergarten to the university the laboratory method predominates. Things are studied and books are used as helps. Pupils are educated to investigate. Experiment and research are made the basis. Judicious oral teaching combined with rational bookwork characterizes the new education. Development and not learning is primary.

Oral and Book Work vary with the Stages of Growth.

Books are our best helps. As pupil experience enlarges books are used more and more. The diagram indicates in some degree the relative amount of oral work as compared with bookwork in our best schools.

Possibly the proportion of college bookwork is exaggerated in view of the marvellous increase of the laboratory work, but research and the lectures are here counted as bookwork. At first the pupils depend on the teacher for information, but as they advance they come to depend less and less on the teacher and more and more on books.



At first the child learns about things by direct inspection; it gains ideas directly from material objects and from its own conscious activities. As the months multiply the child more and more assimilates immediate and remembered experiences in forming its notions of things. Little by little the pupil learns to appropriate the experiences of others. Teacher experience supplements child experience; the teacher stimulates and guides the efforts of the child, but its ideas are gained directly through its own experience. This is oral work. When prepared for it the pupil is led to find out from books. Printed words now represent to the pupil ideas of things in new combinations. The learner begins to understand symbols and so gains knowledge from books. This is bookwork.

Kindergarten Work is Oral; Primary Work is Largely Oral.—During the first and second primary years, as during the kindergarten years, nearly all

eaching is oral work. During the third and fourth years nearly three fourths of the work is still oral. During the intermediate years books become more and more helpful, but oral work still predominates. In the high school oral and book work, at first, are about equal. In the college, bookwork predominates as research and the lectures are counted as bookwork. As the learner advances he enters into the heritage of human learning as recorded in books, but at every step he builds on his own experiences.

ORAL WORK IN ELEMENTARY SCHOOLS.

As teachers become skilful it is surprising to observe the preponderance of oral work in our elementary schools.

1. *The Conduct Lessons are Oral.* Even in the history of our own country, conduct bearings must be very largely oral work. The study lessons are oral, but the pupils are trained to find out from books as well as from things. The lessons in general history and civics are oral lessons. Only in American history do we have strictly bookwork.

2. *Language-Literature Lessons are partly Oral.* Reading wisely combines oral and book work, and so does literature after the second year. The language lessons and composition are very largely oral work. Things, ideas, symbols—this is the order. The grammar lessons during the seventh and eighth years may be counted as book lessons.

3. *The Mathematics Lessons become more and more Bookwork.* During the first and second years all the lessons are oral. Concrete geometry is strict-

ly oral throughout the elementary course. After the second year arithmetic combines oral and book work. We class the so-called mental arithmetic as oral. The algebra in the seventh and eighth grades may be considered bookwork.

4. *The Elementary Science Work is nearly all Oral Work.* The geography lessons, after the second year, wisely unite oral and book work, but during the first and second years the work is strictly oral. The biology lessons are strictly oral, but are supplemented by the library. The lessons in physics are also oral lessons. Except in geography no text-book is used in the science studies.

5. *During the Primary Years all the Art Instruction is Oral.* During the intermediate years oral and book work are combined in drawing and vocal music. The instruction in physical culture and manual training is counted as oral.

ORAL TEACHING.

Good book teaching is a great art, but good oral teaching is a greater. Jesus taught orally. Socrates, Plato, Aristotle, and Pestalozzi taught orally. What is meant by oral teaching? Study the parable of the sower; by means of the most familiar incidents Jesus teaches the people the greatest truths. Oral teaching in its best form exercises, it is estimated, brain areas threefold greater than the mechanical book teaching of the old schoolmasters.

1. *The Teacher leads the Learner to observe, to investigate, to tell.* Each pupil is given a leaf to study, to draw, to describe. The teacher leads the

learner to experience and discover and do and tell. Observation lessons are fundamental. Dr. Hall says: "The mechanical learning of the regulation branches was for a long time the chief work of the school, and it affected a slight brain area. When the objective work came in its best form the area awakened, strengthened, and developed—was increased about threefold."

2. *The Teacher educates through the Story.* Pupils are led to discover relations and duties to others. I place story teaching side by side with object teaching. Human nature interests children equally with nature studies. The parable, the anecdote, the fairy tale, the conduct story, the history story, the biographical story, the tale of travel and exploration, are some of the forms of story teaching. As a rule, teacher and pupils should tell the stories rather than read them. The fitting story is a great educative means.

3. *The Teacher by apt Illustrations leads Pupils to see clearly.* Familiar examples shed a flood of light on the dark places. The abstract is illumined by the concrete. As far as possible real cases should be used. Jesus illustrated his lessons by giving cases of real men and women. Experience with realities is made the basis, and illustrations are drawn from environments. Real things are used in study and class work whenever possible.

4. *The Teacher by Illustrative Apparatus helps Pupils to gain Insight.* The many illustrative devices now available are invaluable. Pupils are trained to make and use illustrative apparatus; manual training is remarkably helpful. Maps, charts, diagrams,

cuts, pictures representing realities, greatly assist, and all schoolrooms should be rich in these helps.

5. *The Teacher by means of Drawing educates.* Agassiz as he taught represented on the board the various stages of growth from the egg to the full-grown bird. Nothing is more helpful to teacher and pupil than skilful drawing. Even crude representations illustrate. Ability to draw often doubles the efficiency of the teacher.

6. *The Teacher impresses by Examples.*—Even Kant thus makes clear some things in his philosophy. Jesus constantly gives examples. At every step the skilful teacher gives illustrative examples, and also leads the pupils to give original examples from their own experience.

BOOK TEACHING.

We have a profound respect for good book teaching. The old schoolmaster taught thoroughly Latin and Greek and mathematics, and thus educated for centuries the world's leaders. The best things are in books. Oral teaching leads to individual experience; book teaching re-enforces intuitive knowledge by all learning. Oral teaching leads the learner to lay a foundation in personal experience; book teaching enriches personal experience by the experience of the race.

1. *The True Teacher is known by the Lessons assigned for Study.* A definite subject with a definite book lesson is assigned for study. Efficient teachers assign short book lessons such as pupils can and will prepare. Only stupid teachers assign unreasonable lessons.

The pre-survey is highly important for young pupils. In assigning the lesson the teacher leads the pupils to grasp the relation of the new topic to the previous work. He in some way creates interest in the new lesson and gives helpful hints about its study. In all elementary classes the pre-survey is exceedingly helpful. Even our successful high-school teachers seldom fail to utilize this device.

2. *The Study of Book Lessons is an Art.* The pupil is trained to find out from books. The pre-survey connects the new lesson with the pupil's world and so creates interest. The pre-survey shows the pupil how to study the lesson, and so no time is wasted. Occasionally the teacher and the pupils study a lesson together. The work is so managed that pupils acquire the habit of diligent and efficient study, and become expert in gaining information from the printed page.

3. *The Teaching of Book Lessons takes the Teacher to the Utmost.* The subject is tides. What does the book say? What do you say? The pupil gives in his own words information gained from the book. Now the real teaching begins. What do you think? The pupil is led to present his own notions. Helpful devices are used. Oral information and the library supplement the text-book. The pupil's outlook enlarges, his information grows broader and broader, and his grasp of things becomes greater and greater.

4. *The Right Use of Books is a School Art.* No one now favours the slavish use of text-books. Mere memory work is not educative. Repeating is well enough for the phonograph. Good book teaching

trains pupils to read and reflect, to examine critically, to fully grasp the meaning of the author, to thoroughly assimilate the thought. The old-time professors did this in teaching Latin and Greek. We must do this in teaching English and history and science. However excellent our oral teaching, we leave our pupils poor indeed if we fail to lead them to gain the art of mastering the printed page. (Read Chapter VIII.)

CHAPTER XIX.

GOOD TEACHING IN LIEU OF EXTRANEous INCENTIVES.

THE working plan here outlined accords with sound educational principles and the best in school life. It accords with common sense and the advanced educational thought of the world. It strikes at the root of a group of hurtful devices and vicious practices. Well-meaning teachers have come to use without consideration the per-cent system with its train of evils; it has become the fashion. Many teachers do not now see how they could manage without per-cent marking, nor did the old schoolmaster see how he could get on without the rod. But with good teaching we find that schools get on vastly better without than with rods, test examinations, and per-cent markings. Let us calmly re-examine some of the extraneous incentives now in fashion and seek for better things.

WRITTEN RECITATIONS IN LIEU OF TEST EXAMINATIONS.

Vital teaching is the essential thing. It creates and sustains interest, and interest is central in all school work. The interested pupil feels a burning desire to find out; he truly hungers and thirsts for knowledge. The dreaded test examination, cruel marking, perverting prizes, and other extraneous incentives, are not even thought of by pupil or teacher. The real teacher, it is true, even when burdened with these incumbrances, succeeds, but does so by counter-acting in some degree their hurtful tendencies. In the new education, teacher and pupils are freed from hurtful devices, and the written recitation takes the place of the dreaded test examination. Experience has demonstrated that the gain by this substitution is simply incalculable. The periodic examination in our schools as the test of scholarship and as the standard for promotion may be wisely consigned to the limbo of hurtful school devices; the written recitation is a beneficent substitute. Some reasons for the change are given in outline; the elaboration is left to teachers.

1. *The Written Recitation is Educative.* It trains the pupils to do their best under pressure. During the written recitation each pupil strives to produce a brief but creditable paper. The art of clear thinking and concise expression is cultivated. The written recitation has all the merits of the test examination without its hurtful characteristics and its noneducative effects. The written recitation is equally adapted to primary and university classes.

2. *The Written Recitation occurs when needed.* It comes whenever the teacher deems it helpful. No pupil thinks of it or makes special preparation for it; it is simply a recitation. The pupils use their writing tablets, and so are always ready for written work. Periodicity is one of the most hurtful features of the test examination, inevitably leading to hurtful cramming, spasmodic study, and sly cheating. Stated examinations occasion dread, produce injurious excitement, and seriously interfere with the regular work. The written recitation is a panacea for these real evils.

3. *The Written Recitation is in Line with the Daily Work.* It helps and does not hurt. There is no break in the work, and hence no loss of time or interest. The topics for the written recitation include the new lesson as well as the previous lessons. Like all good class work, the written recitation is apperceptive; the teacher adapts the subject to the pupils, and each pupil writes in view of his previous acquisitions and assimilates into unity the old and the new. On the other hand, the dreaded test examination seriously interrupts the regular class work, occasioning the educational loss of one or more days every month. Pupils study in view of the examination and waste their energies thinking about it. The hasty cramming is not helpful study. The incentive is not wholesome. Then, grading these test papers wastes the precious time and squanders the limited energies of the teacher. In a word, the usual test examination injures teacher and pupils and seriously interrupts the regular school work. The written recitation remedies these evils.

4. *The Written Recitation covers Familiar Ground.* The daily review, a feature of all good teaching, keeps the whole subject fresh. The pupils write well because they know thoroughly. The topics and questions are definite and clear and embrace the most helpful points. Comundrums, mere tests of memory, unimportant details, and smart questions are excluded. The aim is to foster thoughtful and helpful habits of study and expression. The test examination deals largely with unfamiliar topics, and hence the pupils do not write well. Too often it is a mere test of memory. From the fact that it is made a test of scholarship it seems impossible to make it educative.

5. *Written Recitations count as other Recitations.* In all class work the appreciative teacher approves good work. The "Well done" and "Try again" come spontaneously. The same is true of the written recitation. At his leisure the teacher reads the papers. The creditable papers are marked S (satisfactory), but some papers are marked U (unsatisfactory). The papers thus marked are returned to the pupils. The written recitation is thought of and valued as the ordinary recitation. The S and the U are taken as the "Well done" and the "Try again" in the daily work. Skillful teachers train their pupils to criticise written work. The dreaded test examination is the educational contrast. The pupils think of little else than the coming examination, for it determines their fate. On it depends class standing, promotion, graduation, prizes, honours. Modify it as we may, the pupils will still take this view of the test examination. As edu-

cators, we see no way to avoid expunging from our school vocabulary the very expression.

6. *Good Teaching supplements Oral with Written Work.* In the high school, the college, and the professional school written work supplements the lecture. During the first ten or fifteen minutes of the recitation period the students write on topics discussed in the lectures, in the text-books, and in the reference-books. The teacher finds this infinitely better than the everlasting lecture and the dreadful note-taking to be followed by the test examination. We find the professors who know how to teach pursuing this plan to the great advantage of the students. The professor comes to know the work of each student. Occasionally he has a written recitation, but has no use for term test examinations or for final examinations. Good oral teaching is constantly supplemented by written work in our elementary schools.

7. *The Good in the Old is retained in the New.* Only the evils of the test examination are discarded. The written recitation embodies the spirit of the new education, just as the test examination embodied the spirit of the old education. It helps and does not hurt. It is safe and all-sufficient. Many of our best teachers and most progressive schools have substituted the written recitation for the test examination with gratifying results. They have exchanged a hurtful for a helpful device. It is reasonable to predict that the test examination early in the twentieth century will disappear as a school device, and will be replaced by the beneficent written recitation. Good teaching and efficient study will become the rule.

GOOD TEACHING IN LIEU OF PER-CENT MARKING.

It is safe to class per-cent marking as a hurtful device. As the rod was the panacea of the old school-master, so marking is the panacea of the modern stationary teacher. He sits with pencil in hand and marks each answer, marks each violation of the rules. Progressive educators substitute vital teaching for marking and all other hurtful devices. Colonel F. W. Parker regards per-cent marking as criminal as stealing. Superintendent Arnold Tompkins considers the percentage device as an outrage on the learning process. "If 100 per cent," says Dr. E. E. White, "were a chosen idol, then worship of this percentage god would not be more harmful than it is in many schools." Per-cent marking injures teacher and pupils, nor has it a single redeeming feature; it hurts and does not help.

1. *Good Teaching appeals to all High Incentives.* Study is duty; study fits pupils to help others; study is full of interest; study leads up to knowledge and usefulness. True teaching educates, for it keeps the learner face to face with the beauty world and the truth world and the duty world. Every lesson makes for character as well as for scholarship. But per-cent marking is a low incentive. It magnifies success at the expense of fidelity. It fosters a brood of school vipers, such as honours, prizes, and hurtful emulations. It abounds in the exact ratio of poor teaching; the poorer the teaching the more perfect the marking. Good teaching leaves no time or occasion for marking. Too often per-cent marking proves an antidote to high thinking and moral teaching.

2. *Good Teaching induces Effective Study.* The pupil is deeply interested in the subject, and does his best to find out. The teacher encourages and guides effort, and leads the pupils in their exploring expeditions. The pupil comes to count truth more precious than diamonds. Truth is its own reward, but per-cent marking is an extraneous incentive. Marking proposes as a reward for mechanical success a high mark, and as a punishment for mechanical failure a low mark. It may make an army of slaves to the per-cent god, but it does not create a thirst for truth. At best it is an artificial and hurtful incentive. It comes like a hideous goblin between the teacher and the pupils, between the learner and the subject, between the learner and the truth.

3. *Good Teaching is All-sufficient.* This makes the kindergarten a thing of beauty and the modern primary school a delight. The teacher understands the little ones and adapts the work to them. Each one is kept interested and busy. All come to love the work. Marking is not even dreamed of in kindergarten and primary classes. Good teaching is all-sufficient at all stages of growth. Per-cent marking nowhere works pupil good. Good teaching, from the kindergarten to the university, excludes marking as not only useless but also vicious.

4. *Good Teaching economizes Time and Energy.* Pupil energy and pupil time are precious things. Good teaching makes pupil effort educative and improves the golden moments as they fly. The teacher teaches. Per-cent marking squanders time and energy. Per-cent marking with its train of evils—

prizes, honours, test examinations, per-cent records, per-cent reports—wastes, in many schools, full half the energies of teacher and pupils. It is the monster educational robber. It hurts and does not help. The schoolkeeper marks, but the true teacher teaches.

5. *Good Teaching discards all Forms of Comparative Marking.* All marking that compels the study of the relative merits of pupils is essentially vicious. The words Poor, Fair, Good, Excellent, are preferable to per-cent marks, for they indicate quality of work rather than quantity. But all the same the fundamental law is violated. Pupil must be compared with pupil. As an incentive to good conduct and earnest study, qualitative marking retains many of the evils of per-cent marking. All marking, qualitative or quantitative, in which pupil is compared with pupil, is decidedly hurtful. But one question is either necessary or permissible: "Is the pupil doing well?" This the teacher asks himself, and spares no effort to secure an affirmative answer. Good teaching is the legitimate substitute for all extraneous incentives and the infallible remedy for the deplorable marking habit.

EDUCATIVE RECORDS AND REPORTS IN LIEU OF PERCENTAGE BOOKKEEPING.

What will help and not hurt? Elaborate school bookkeeping is simply inexcusable; it is one of the numerous evils charged to the account of the percentage system. It needlessly dissipates teaching energy; it imposes weary drudgery without giving any helpful returns. School bookkeeping should be reduced to the minimum. The blank spaces opposite the names

indicate satisfactory conduct and scholarship; all the time and energies of the teacher are devoted to teaching.

1. *Attendance is indicated by a Blank Space.* Absence is indicated by a 1; this becomes F in case of A. M. tardiness; becomes L in case of P. M. tardiness; becomes + when the absentee is excused. By dividing the school or class into sections, with leaders to report the absent, the roll call is almost instantaneous, even in large schools and classes. No time or energy is wasted in keeping the attendance record. The blank is the sign of the clear record.

2. *Conduct, when Satisfactory, is indicated by a Blank Space.* When unsatisfactory, it is indicated by U. The U is written in pencil, in order that it may be erased as soon as the pupil's conduct becomes satisfactory. A clear record is a blank. It is a desideratum to so manage that each pupil will have a clear conduct record. Demerit marks are not even thought of by the progressive teacher or his pupils. The teacher studies most of all to promote good conduct. When a record or report is to be made, one question, and only one, is asked, "Is the pupil's conduct, taken as a whole, satisfactory?" This plan is in the line of conduct culture and wastes no time or energy.

3. *Class Standing is indicated by a Blank Space when Satisfactory.* When unsatisfactory, it is indicated by the letter U. "Is the pupil doing good work?" "Is the learner keeping with his class?" The blank indicates the affirmative and the U a negative answer. The U is in pencil. The teacher spares

no effort to induce the pupil to so work that the U may be erased. The record is strictly private; it is for the teacher, not for the pupils. The teacher must know his pupils and must see clearly their limitations. The ideal class will have no U's in the final record. The U indicates that the pupil is not working with the class, and that he must work up or be dropped to a lower class. As long as a pupil works with his class no record is needed; but when a pupil is failing to keep with his class the matter must receive attention. The utmost skill of the teacher is required in these cases.

4. *Reports indicate the Standing of the Pupil.* Conduct and scholarship, when satisfactory, are indicated by S, and by U when unsatisfactory. Parents and pupils will readily understand the monthly report cards, and school boards will easily understand the monthly reports. The words Poor, Fair, Good, Excellent, now used in the reports of most schools, have many advantages over percentages. The estimate of standing is qualitative, not quantitative; it requires no explanation. But these harmless words occasion a world of trouble. Each pupil must be compared with his fellows and elaborate records must be kept. The teacher must waste precious hours settling the relative standing of pupils. This is something that ought never to be thought of. Pupils will certainly study in view of these distinctions, and will suffer nearly all the evils of per-cent marking. Clearly such records and reports hurt and do not help. They are not educative. They compare pupil with pupil and thus foster jealousies and rivalries. Parents and school boards do not wish details; all they desire to

know is whether the pupil is or is not doing well. The S signifies that the pupil is progressing satisfactorily; the U signifies that the pupil is not doing well. Whatever is more than this comes of evil. Such records and reports answer all educative purposes. They require the minimum amount of teacher energy. This plan commends itself to all thoughtful educators; and is equally suited to all schools from the kindergarten to the university.

GOOD TEACHING PREPARES FOR PROMOTION AND GRADUATION.

Interest in study leads to mastery. Day by day the pupil does his best in the best ways. Growth is the result. Good conduct and good scholarship come of good teaching and good management.

1. *Promotion follows Satisfactory Work.* It does not depend on per-cent marks or on test examinations. Pupils study to know. They become interested in the work and advance with their classes. As the days go by, pupils found able to work more profitably with higher classes are promoted, and pupils who prove unable to work with their classes are demoted. As the terms go by, pupils who do satisfactory work go forward with the classes. The teacher knows. There can be no possible excuse for per-cent marking or for test examinations as conditions for promotion or graduation; such devices occasion a world of trouble and do incalculable injury. Good management and good teaching remedy these evils.

2. *Graduation follows the Satisfactory Completion of the Course.* The pupil advances, step by

step, through the elementary work and receives the elementary-school certificate; this entitles him to enter the high school. The student advances, year by year, in the high-school work, and on its satisfactory completion receives the high-school diploma; this entitles him to enter the normal school or the college. The college student completes satisfactorily a college course and receives the college diploma; this entitles him to enter a professional school. The elementary certificate means that the pupil has satisfactorily completed the elementary-school course and is prepared to do high-school work. The high-school diploma means that the student has satisfactorily completed a high-school course and is prepared for college work. The college diploma means that the student has satisfactorily completed a college course and is prepared to enter a professional school or begin his life work.

The plan thus outlined eliminates hurtful drudgery and harmful devices and substitutes good teaching. It makes all school work educative. It substitutes high motives for low incentives. The per-cent marking perfunctory drudge will for a time plod on in his ruts, but the true teacher will teach and grow and bless. The teacher must not be fanatical nor even extreme, but must be *progressive*. What human reason has demonstrated and human experience verified, that is safe. Educational conservatism becomes a crime when it keeps teachers in the ruts. We dare not keep on in ways that work our pupils irreparable injury; nor do we dare to deprive our pupils of the advantages of new and better ways.

EDUCATIVE CLASS MANAGEMENT.

EDUCATIVE STUDY HINTS AND TOPICS FOR DISCUSSION.

XV. Class Organization and Control.—Describe the evolution of classification. Compare individualism and classification. In the school sense, what is a true class? Discuss objects of classification: plan of classification; size of classes; inspiration of the class; advantages of the class. Describe the hygienic conditions of educative class work. How does it help to give a short recess at the close of each school hour? State some of the advantages of happy class control. Why must each teacher work out anew the problems of classification? Describe the scheme for classifying the rural school; the primary; the intermediate; the high school; the college. Why do educators plan simplicity? uniformity? unity? Describe your scheme for classifying your school.

XVI. Educative Class Work.—Make clear the difference between educative and noneducative class work. Give the old and new meaning of *recitation*. Why do you prefer *class work*? Name some characteristics of excellent class work. Discuss fully spontaneity; revealing and concealing; review and recapitulation; lesson plan; the drill; the pre-survey.

Define class methods; efficient class methods; hurtful class methods. Discuss the unity method; the individual method; the investigation method; the Socratic method; the conversation method; the topic method; the discussion method; the lecture method. Give an example of each.

Define class device. Illustrate the distinction you make between a class method and a class device. State some advantages claimed for the following devices: The class; written work; laboratory work; diagrams; reporting; reciprocal teaching; concert work; original devices.

XVII. School and Class Tactics.—Give the meaning and object of school tactics. What do you mean by helpful tactics? by hurtful tactics? State some underlying principles. Give some reasons why every school should have an electric programme clock. Describe the economic plan for calling and dismissing school; calling and dismissing classes. Describe fitting recitation tactics; board

tactics; concert tactics. Why do you favour reasonable school and class tactics?

XVIII. Oral Work and Book Work.—Why do we think of the old education as bookwork? What does the new education do? Why must oral work precede and accompany bookwork? Discuss oral work in the kindergarten; in conduct lessons; in language-literature lessons; in science lessons; in mathematic lessons; in art lessons.

What is meant by oral teaching? Give an example of observation oral teaching; of the story; of illustration; of drawing; of example. Name three advantages claimed for oral teaching.

What is meant by book teaching? Compare book and oral teaching. Discuss assigning lessons; studying book lessons; teaching book lessons. Why does Dr. Harris consider the art of properly using books the greatest of school arts? See pp. 75, 80.

XIX. Good Teaching in Lien of Extraneous Incentives.—Compare good teaching and perfunctory class work. Contrast the written recitation and the test examination. Discuss the reasons for transforming the examination into the written recitation. Describe the marking expert. What does Colonel Parker say about 100 per cent? Dr. White? Superintendent Thompson? What have you to say? Discuss the reasons why good teaching should take the place of per-cent marking.

What is meant by educative records and reports? Explain your plan of calling roll and recording attendance. State advantages. State your plan of keeping the conduct record. Why is it better than the old per-cent record? Explain your plan of keeping the scholarship record. Give your reasons for it. Explain your method of reporting. What are its advantages? Why is qualitative marking better than quantitative? Give your reasons for discarding both. Show the great advantages of the rational method of promotion and graduation. Why should we discard the old plan of having per-cent marks and test examinations determine promotion and graduation? Show that good teaching tends to consign all extraneous school incentives to the limbo of hurtful school devices.

PART V.

PUPIL IMPROVEMENT THROUGH BETTER SCHOOL AND COLLEGE ORGANIZATION AND CORRELATION.

CHAPTER XX.—PUPIL IMPROVEMENT THROUGH EDUCATIVE COR-
RELATION OF SCHOOLS AND SCHOOL COURSES.

XXI.—PUPIL IMPROVEMENT THROUGH EFFICIENT
RURAL SCHOOLS.

XXII.—PUPIL IMPROVEMENT THROUGH EFFICIENT KIN-
DERGARTEN AND PRIMARY SCHOOLS.

XXIII.—PUPIL IMPROVEMENT THROUGH SPECIALIZED AND
CORRELATED INTERMEDIATE SCHOOLS.

XXIV.—PUPIL IMPROVEMENT THROUGH SPECIALIZED AND
CORRELATED HIGH SCHOOLS.

XXV.—STUDENT IMPROVEMENT THROUGH PROGRESSIVE
AND CORRELATED COLLEGES AND UNIVERSI-
TIES.

EDUCATIVE CORRELATION OF SCHOOLS AND COURSES OF STUDY.

THE FIVE COORDINATE GROUPS OF STUDIES	COURSE OF STUDY FOR ELEMENTARY SCHOOLS	COURSE OF STUDY FOR SECONDARY SCHOOLS	COURSE OF STUDY FOR COLLEGES
I. { THE CONDUCT GROUP OF STUDIES	Special Conduct Lessons. How to study. Biographical History. Oral Civics. Mind Lessons.	Practical Ethics. Art of Investigation. Comparative History. Elementary Civics. Elementary Psychology.	Philosophic Ethics. Art of Research. Philosophic History. Philosophic Civics. Philosophy. Special Studies.
II. { THE LANGUAGE LITERATURE GROUP OF STUDIES	Reading, Oral and Written Expression English Language and Literature. Latin or German or French begun.	Oral and Written Expression. English Language and Literature. Foreign Languages and Literatures.	Oral and Written Expression. English Language and Literature. Foreign Languages and Literatures. Special Studies.
III. { THE SCIENCE GROUP OF STUDIES	Geography. Oral Geography. Oral Physics. Oral Astronomy.	Physical Geography. Elementary Biology. Elementary Physics. Elementary Astronomy.	Physiography and Geology. Biology. Physics and Chemistry. Astronomy. Special Studies.
IV. { THE MATHEMATICS GROUP OF STUDIES	Arithmetic; Introductory Algebra. Concrete Geometry. Oral Trigonometry. Oral Book-Keeping.	Arithmetic; Algebra Demonstrative Geometry. Trigonometry. Elementary Book-Keeping.	Higher Algebra, Calculus. Intuitive Geometry. Trigonometry. Alg. & J. Mathematics. Special Studies.
V. { THE ART GROUP OF STUDIES	Physical Culture. Writing and Drawing. Vocal Music. Manual Training.	Physical Culture. Drawing. Vocal Music. Manual Training.	Physical Culture. Drawing. Music and Poetry. Art Criticism. Specia. Studies.

PART FIFTH.

BETTER SCHOOL AND COLLEGE ORGANIZATION AND CORRELATION.

CHAPTER XX.

EDUCATIVE CORRELATION OF SCHOOLS AND SCHOOL COURSES.

Education is the Science of Self-evolution.—Growth through lawful self-activity is the central idea in the science of education. Teaching is the art of promoting self-evolution. Growth through guided self-effort is the central idea in the teaching art. In the mental economy all the activities of a self supplement and re-enforce each activity ; there is perfect unity in the mental life. In the educational economy the learner assimilates into unity his acquisitions, and all studies supplement and re-enforce each study. The pupil world is a unit. Schools and subjects are correlated into organic unity to facilitate the preparation of pupils for complete living.

The Organic Unity of Schools and Courses forms an Educational Highway.—Courses of study present the processes of self-evolution in terms of subject-matter ;

no one can teach a grade or a subject intelligently without a grasp of its organic relations to the whole. Correlation of the schools, the colleges, and courses of study constitute an educational highway leading up from feeble infancy to strong manhood ; from the nursery to all fields of achievement. The central idea in its construction is pupil improvement. Around this vital principle we seek to correlate into organic unity our schools and our school work. The aim is to make the most of the individual self and the social self and the cosmic self, thus enriching human life. Our ideal is unceasing educational progress. We study to embody in the educative organism the best thought and the most helpful experience of the race ; we strive to advance from the good to the better and from the better to the best.

The Parts are studied in View of the Whole.—The physiologist thinks of the human body as a complex unit, and he studies each organ and function in its relations to other organs and functions and to the entire organism. The teacher thinks of schools and school work as an organic unit, and he studies each class of schools in its relations to other classes of schools and in its relation to the whole school organism. He studies each subject in its relation to other subjects and to the entire school work.

The Intelligent Teacher learns to view Human Life as a Whole.—He comes to think of the world as a school and of human beings as learners. In the home he studies the budding infant ; in the kindergarten he observes the happy little ones playing and growing ; in the primary he watches the glad children playing,

working, growing ; in the intermediate he enjoys the wild activities and the vigorous explorations of boys and girls ; in the high school he becomes deeply interested in the hopes and achievements of aspiring youths ; in the college he lives over again with the gifted students the struggles of other years ; in the battle of life he watches with throbbing heart the successes and failures of his pupils ; and as the toilers one by one pass over the river, he seems to hear the " Well done " of the Great Teacher as he welcomes them to the celestial university.

Each Class of Schools stands for a Stage of Growth.—The world's chiefest work is the creation and conduct of articulated schools adapted to the well-defined stages of pupil development. We study infancy and create the kindergarten to lead the infants from the home to the school ; we study childhood and create the primary to lead the children from the kindergarten to the intermediate ; we study boyhood and girlhood and create the intermediate to lead boys and girls from the primary to the high school ; we study youth and create the high school to lead the youths from the intermediate to the college ; we study young manhood and young womanhood and create the college to lead young men and women from the high school to the university. Thus the ideal educational highway embodies the world's educational ideal. Our various classes of schools and the school work are correlated into organic educational unity.

The Course of Study, in terms of subjects, represents the stages of pupil growth. The educator profoundly studies pupil environments, pupil nature, and

pupil growth that he may provide for pupil needs. He thinks of the pupil as a cosmic being, needing to be brought in educative touch with the universe. He selects from boundless fields the best. He adapts the work to the growing pupil. He grades the educational highway to meet the wants of the pupils at all stages of development. The progressive teacher earnestly studies the correlation of schools and courses of study. The kindergartner as well as the college professor thinks of the schools and the school work as an organic unit. Each as an intelligent artist does his work in view of the whole; each phase of a subject is taught in view of all its school phases, in view of the entire school work, in view of life.

Studies are selected in View of their Educative Values.

—Education prepares the pupil for complete living. Those subjects which do most to develop power and to fit the pupil for complete living have the highest educative values. Studies rich in incentives and calculated to call forth vigorous and persistent effort have high educative values. Branches of study tending to awaken the widest interests, tending to best develop and train the activities of the pupil, tending to best fit the pupil to act well his part in the complex civilization in which he must live, are counted of the highest educative value. Expressed in terms of physiological psychology, a study that awakens, strengthens, and develops the highest brain areas, such as are connected with thought and the higher emotions and the moral will, is of the greatest educative value. From the wide field of human learning studies counted of highest educative values are selected and organized into courses of study.

Co-ordinate Study Groups.—The grouping of the school studies is an important educational device made necessary by the startling multiplication of branches claiming a place in the school course. Two schemes for grouping the school studies are here outlined—the philosophic grouping by Dr. W. T. Harris and the practical grouping by the author. The educational world accepts the scheme of Dr. Harris as the true basis of all courses of study.

THE FIVE NECESSARY CO-ORDINATE GROUPS OF STUDIES.

"The studies of the school fall naturally into five co-ordinate groups, thus permitting a choice within each group as to the arrangement of its several topics. These five co-ordinate groups are: First, mathematics and physics; second, biology, as including chiefly the plant and the animal; third, literature and art, including chiefly the study of literary works of art; fourth, grammar and the technical and scientific study of language, leading to such branches as logic and psychology; fifth, history and the study of sociological, political, and social institutions. Each one of these groups should be represented in the curriculum at all times by some topic suited to the age and previous training of the pupil. This is demanded by the two kinds of correlation: (1) Symmetrical Whole of Studies in the World of Human Learning, and (2) The Psychological Symmetry, or the Whole Mind.

"The first stage of school education is education for culture and education for the purpose of gaining command of the conventionalities of intelligence. These conventionalities are such arts as reading and writing and the use of figures, technicalities of maps, dictionaries, the art of drawing, and all of those semi-mechanical facilities which enable the child to get access to the intellectual conquests of the race. Later on in the school course, when the pupil passes out of his elementary studies, which partake more of the nature of art than of science, he arrives in the secondary school and the college to the study of science and the technique necessary for its preservation and communication. All these things belong to the first stage of school instruction whose

aim is culture. Post-graduate work and the work of professional schools has not the aim of culture so much as the aim of fitting the person for a special vocation. It is in the first stage, the schools for culture, that these five co-ordinate branches should be represented in a symmetrical manner. It is not to be thought that a professional school or a course of university study should be symmetrical. From the primary school on through the academic course of the college there should be symmetry and five co-ordinate groups of studies represented at each part of the course; at least in each year, although perhaps not throughout each part of the year.

“ **I. Inorganic Nature.**—Commencing with the outlook of the child upon the world of Nature, it has been found that arithmetic, or mathematical study, furnishes the first scientific key to the existence of bodies and their various motions. Mathematics in its pure form, as arithmetic, algebra, geometry, and the application of the analytical method, as well as mathematics in its applied form to matter and force, or statics and dynamics, furnishes us the peculiar study that gives to us, whether as children or as men, the command of Nature in this aspect. It is all quantitative. Mathematics furnishes the instrument, the tool of thought, which gives us power in this realm.

“ **II. Organic Nature.**—The second group includes whatever is organic in Nature, especially studies relating to the plant and the animal, the growth of material for food and clothing, and in a large measure the means of transportation and culture. This study of the organic phase of Nature forms a great portion of the branch of study known as geography in the elementary school. These two phases of Nature, the inorganic and the organic, exhaust the entire field. Hence a quantitative study, conducted in pure and applied mathematics, and biology, or the study of life in its manifestations, cover Nature.

“ **III. Literature.**—The first study relating to human nature as contrasted with mere organic and inorganic Nature is literature. Literature, as the fifth highest of the fine arts, reveals human nature in its intrinsic form. It may be said in general that a literary work of art, a poem, whether lyric, dramatic, or epic, or a prose work of art, such as a novel or a drama, reveals human nature in its height and depth. It shows the growth of a feeling or sentiment first into a conviction and then into a deed; feelings,

thoughts, and deeds are thus systematically unfolded by a literary work of art in such a way as to explain a complete genesis of human action. Moreover, in a literary work of art there is a revelation of man as a member of social institutions.

“ **IV. Language.**—Our next co-ordinate branch includes grammar and language, and studies allied to it, such as logic and psychology. In the elementary school we have simply grammar. Grammar treats of the structure of language. There is a mechanical side to it in orthography and a technical side to it in each of its phases. But one can not call grammar in any peculiar sense a formal study any more than he can apply the same epithet to natural science of any kind. The method of grammar leads to wonderful insight into the nature of reason itself. It is this insight which it gives us into our methods of thinking and of uttering our thoughts that furnishes the justification for grammar as one of the leading studies in the curriculum. Its use in teaching correct speaking and writing is always secondary.

“ **V. History.**—There is a fifth co-ordinate group of studies, namely, that of history. History looks to the formation of the state as the chief of human institutions. The development of states; the collisions of individuals with the state; the collisions of the states with one another—these form the topics of history. The method of history keeps its gaze fixed upon the development of the social whole and the progress which it makes in realizing within its citizens the freedom of the whole. This method, it is evident enough, is different from the literary; different from the grammatical; different also from the biological and the mathematical methods. In history we see how the little selves, or individuals, unite to form the big self, or the nation.

“ The studies of the school fall naturally into these five co-ordinate groups. No one of these groups can be taken as a substitute for any other, and no one of these groups can be spared from a symmetrical whole without distorting the pupil’s view of the world.”—W. T. HARRIS.

THE FIVE PRACTICAL CO-ORDINATE STUDY GROUPS.

School courses are products of experience. Theory determines the what, but experience determines

the how. Theory demonstrates the necessity for the five co-ordinate groups of studies, but experience arranges the studies in five co-ordinate groups for practical school work. First of all, we have the conduct group of studies; second, the language-literature group; third, the science group; fourth, the mathematics group; and fifth, the art group. The school work seems to naturally fall into these groups. The practical grouping aims to embody all the requirements of the philosophical grouping, and it is hoped that it will prove to be a reasonable basis for helpful correlation and concentration in school and college work.

I. The Conduct Group of Studies.
[Read Chapter XXVI.]

- 1. Conduct lessons, elementary ethics, ethics.
- 2. Biographical history, comparative history, philosophic history.
- 3. Oral civics, elementary civics, civics.
- 4. Mind lessons, elementary psychology, philosophy.

Conduct is the Greatest Thing in Education.—School principals and college presidents are specialists in conduct culture, and hence are charged with the conduct group of studies. In the elementary school, conduct lessons include school conduct, how to study, and special lessons in proper and right conduct. In the high school, practical ethics is so presented as to make for good conduct. In the college, advanced ethics is so studied as to promote character growth. History, reinforced by literature, is the great conduct study. Civics helps to prepare for good citizenship. Mind lessons lead pupils to understand themselves, and psychology leads on to logic and philosophy. Religion unobtrusively, in the opening exercises and in the life

of the teacher, leads pupils up to the ideal conduct as embodied in the life of Jesus. Wisely taught, all the school studies make for character as well as for scholarship; but there seems to be special fitness in grouping the above-named studies as conduct studies.

II. The Language-Literature Group of Studies. [Read Chapter XXVII.]

1. Reading, expression. 2. English language and literature. 3. Foreign languages and literatures.

Literature stands for human nature at its best. The language-literature studies are accorded the second place in the educative scheme, and are given in school and college programmes double the time of the other study groups. Literature and language are inseparable in school work. From the kindergarten to the university, the new education teaches language in teaching literature, and teaches literature in teaching language. Literature most of all supplements and re-enforces the conduct studies. Language studies supplement all other studies.

III. The Science Group of Studies. [Read Chapter XXVIII.]

1. Geography, geology. 2. Biology. 3. Physics, chemistry. 4. Astronomy.

The science studies re-enforced by mathematics lead to the mastery of our environments. In the science group of studies are included both organic and inorganic Nature studies. The grounds for this inclusion are strictly practical. The learner at all stages of work keeps in touch with both organic and inorganic Nature. Then, in most schools the science

teacher is charged with all the science work. Science is now conceded a place side by side with literature and mathematics in our educational work. The immense educative and practical value of the science studies is now unquestioned. The tendency is to give undue prominence to this group of studies, but thoughtful educators study proportion and fitness.

IV. The Mathematics
Group of Studies. [Read Chapter XXIX.]

{	1. Arithmetic, algebra, calculus.
	2. Concrete geometry, geometry.
	3. Oral trigonometry, trigonometry.
	4. Oral bookkeeping, applied mathematics.

Form and number enter into all thinking. Arithmetic is the first tool of thought, the first step in the conquest of Nature. Geometry stands for form, and is counted the central study in the group. From the kindergarten to the university arithmetic and geometry permeate school work. We think of mathematics as including arithmetic, algebra, geometry, trigonometry, and applied mathematics. Logically, the inorganic sciences are grouped with mathematics. So great is the educative and practical value of these studies that mathematics is everywhere placed side by side with literature and science in our school work.

V. The Art Group of Studies. [Read Chapter XXX.]

{	1. Physical culture.
	2. Writing, drawing.
	3. Vocal music.
	4. Manual training.

The art studies stand for the useful and the beautiful. The art studies re-enforce the other study groups. Physical culture is the art of developing physical vigour. Drawing is the central school art. At every step, in nearly all subjects, the hand and the

eye are made to re-enforce thought. Vocal music in our school work is now ranked with arithmetic and geography. Its educative value is conceded. Manual training, in some form, will be given a place in the schools of the future. The arts mentioned are the school arts. The higher aesthetic and practical arts belong in colleges and universities and art schools.

The Five Practical Study Groups represent Human Learning.—From the standpoint of actual school work the grouping seems to be natural, logical, and practical; it accords substantially with the results of human experience as embodied in the work of our schools and colleges. The five groups include all departments of human learning, and seem to furnish a practical basis for the natural and helpful correlation of studies in school work. Moreover, the five practical study groups seem to be the true basis for organizing school faculties, for planning concentration in teaching, and for arranging school programmes.

ELEMENTARY SCHOOLS AND COURSE OF STUDY.

Elementary schools include all schools between the kindergarten and the high school. The eight years from the sixth to the fourteenth year constitute the elementary school period. We class as elementary schools our public and private rural schools, primary schools, and intermediate schools. We think of the elementary course of study as extending through the eight years of elementary school life.

Report of the Committee of Fifteen on the Correlation of Studies in Elementary Schools.*—This is counted

* Published by American Book Company.

the most helpful of all our educational classics, and is adopted and submitted as a part of this chapter. Please read considerately the entire report before taking up the following items.

Programme Course of Study for Elementary Schools.

BRANCHES	1st year	2d year	3d year	4th year	5th year	6th year	7th year	8th year
Reading	10 lessons a week				5 lessons a week			
Writing	10 lessons a week		5 lessons a week		3 lessons a week			
Spelling (lists)				4 lessons a week				
English Grammar		Oral, with composition lessons			5 lessons a week with text-book			
Latin							5 lessons	
Arithmetic	Oral, 60 minutes a week		5 lessons a week with text book					
Algebra							5 lessons a week	
Geography	Oral, 60 minutes a week		* 5 lessons a week with text book			3 lessons a week		
Natural Science + Hygiene			Sixty minutes a week					
U. S. History						5 lessons a week		
U. S. Constitution								* 5 les.
General History		Oral, 60 minutes a week						
Physical Culture			Sixty minutes a week					
Vocal Music			Sixty minutes a week					
Drawing			Sixty minutes a week					
Manual Training or Singing - Cecilery						One-half day each		
No. of Lessons	20 7 daily exer.	20 + 7 daily exer.	20 - 5 daily exer.	24 + 5 daily exer.	27 + 5 daily exer.	27 + 5 daily exer.	23 + 6 daily exer.	23 + 6 daily exer.
Total Hours of Recitations	12	12	11½	13	16½	16½	17½	17½
Length of Recitations	15 min.	15 min.	20 min.	20 min.	25 min.	25 min.	30 min.	30 min.

*Begins in second half year

SOME CONDENSED EXPLANATIONS.

1. **Elementary Period.**—All schools between the kindergarten and the high school are elementary schools. Pupils are from six to fourteen years of age. The time (eight years) now devoted to elementary-school work should not be reduced.

2. **Recitation Periods.**—Recitations are class exercises conducted by the teacher. As far as possible, study periods and recitation periods should alternate. It is recommended that recitation periods be fifteen minutes during the first and second years, twenty minutes during the third and fourth years, twenty-five minutes during the fifth and sixth years, and thirty minutes during the seventh and eighth years.

3. **Recitation Time.**—The programme shows twenty-seven weekly recitation periods during the first and second years, twenty-five during the third year, twenty-nine during the fourth year, twenty-seven during the fifth and sixth years, and twenty-three during the seventh and eighth years. The primary pupils give to recitations daily from two and one third to two and two thirds hours; the intermediate pupils, from three and one fourth to three and three fourths hours.

4. **Promotions.**—Promotions should be made when the pupils complete the work of the class, and also when a pupil is prepared to work more profitably with a higher class. Keeping pupils marking time produces demoralization. The intervals between the classes must depend on the school. In graded schools it is now half a year or less, but in rural schools the intervals are necessarily much greater.

5. **Few Subjects.**—The prolonged study of a few subjects is incomparably better than the brief study of many subjects. Our schools are at their best when they lead the pupils to develop power through the mastery of the best studies.

6. **Correlation of Studies.**—By this is meant—(1) The arrangement of topics in proper sequence in the course of study, in such a manner that each branch develops in an order suited to the natural and easy progress of the child, and so that each step is taken at the proper time to help his advance to the next step in the same branch, or to the next steps in other related branches of the course of study. (2) The adjustment of the branches of study

in such a manner that the whole course at any given time represents all the great divisions of human learning, as far as is possible at the stage of maturity at which the pupil has arrived, and that each allied group of studies is represented by some one of its branches best adapted for the epoch in question. (3) The selection and arrangement of the branches and topics within each branch, considered psychologically, with a view to afford the best exercise of the faculties of the mind, and to secure the unfolding of those faculties in their natural order, so that no one faculty is so overcultivated or so neglected as to produce abnormal or one-sided mental development. (4) The selection and arrangement in orderly sequence of such objects of study as shall give the child an insight into the world that he lives in, and a command over its resources such as is obtained by a helpful co-operation with one's fellows.—*From Report of Committee of Fifteen.*

SECONDARY SCHOOLS AND COURSES OF STUDY.

Schools leading from the elementary school up to the college are classed as secondary schools. These include public high schools, academies, seminaries, private high schools, and preparatory schools. The high-school period is four years, the pupils entering at about the age of fourteen and graduating at about the age of eighteen.

Report of the Committee of Ten.*—This report on the work of secondary schools as suggestive and as a working basis is submitted as a part of this chapter. For our larger high schools the committee arranged four parallel courses of study. A few condensed explanations seem necessary.

1. *Purpose of High Schools.*—The main function of secondary schools is to prepare pupils for the duties of life. They do not exist to prepare pupils for col-

* Published by American Book Company.

The Four Parallel High-School Courses of Study.

YEAR.	Classical.	Latin-Scientific.		Modern languages.
		Latin	French [or German]	
I.	Latin	5 p.	French [or German]	Latin, or German, or French, 5 p.
	English	5 p.	begin	English, 5 p.
	German [or French]	4 p.	begin	French, 4 p.
	Algebra	4 p.	English	French, 4 p.
	History	4 p.	Algebra	French, 4 p.
II.	Latin	5 p.	begin	French, 4 p.
	English	2 p.	Geometry	French, 3 or 4 p.
	German [or French]	4 p.	Physics	French, 3 p.
	Geometry	3 p.	Botany	French, 3 p.
	Physics	3 p.	Zoölogy	French, 3 p.
III.	Latin	4 p.	begin	Latin, or German, or French, 4 p.
	Greek	5 p.	Geometry	English, 4 p.
	English	3 p.	Physics	English, 4 p.
	German [or French]	4 p.	Botany or zoölogy	Latin, or German, or French, 4 p.
	Mathematics	4 p.	History	English, 3 p.
IV.	Latin	4 p.	begin	Latin, or German, or French, 4 p.
	Greek	5 p.	Mathematics	Latin, or German, or French, 4 p.
	English	2 p.	Algebra	Latin, or German, or French, 4 p.
	German [or French]	3 p.	Geometry	Latin, or German, or French, 4 p.
	Chemistry	3 p.	Astronomy and meteorology	Latin, or German, or French, 4 p.
	Trigonometry and algebra	3 p.	Astronomy and meteorology	Latin, or German, or French, 4 p.
	History	2 p.	History	Latin, or German, or French, 4 p.

lege. The work for the most part is the same for all pupils.

2. *The Four Parallel Courses.*—These are substantially the same, except as to language and literature. The classical course necessarily reduces the work in English and in science; the other courses are nearly identical, with the exception of foreign languages. In our smaller high schools only one course can be sustained, but provisions may be made for some options.

3. *Recitation Periods.*—Each course is limited to twenty recitation periods each week. These periods are usually forty minutes in length. The plan gives the pupil daily three prepared lessons and two conversational or drill lessons.

4. *Laboratory Work and Manual Training.*—Pupils devote two hours on Saturdays to practical work. This includes laboratory work, manual training, and outdoor instruction in science.

5. *Correlation.*—The aim is to correlate the work of elementary schools, secondary schools, and colleges. The plan is to have the elementary certificate pass the pupil into the high school, and to have the high-school diploma pass the pupil into the college. The correlation of subjects was not given specific attention.

6. *Omissions.*—The committee limited their work to leading subjects. It is supposed that time will be found for drawing, music, physical culture, manual training, elementary psychology, and practical ethics.

COLLEGES AND COLLEGE COURSES.

The college stands for the highest school culture. The college period, from about the eighteenth to about the twenty-second year, is termed young manhood and young womanhood. Students are now capable of greater things. The school and college courses are so correlated that the high-school graduate will pass into the college and move on with the work without a break. The studies are the same as in the elementary and secondary schools, but the phases and methods are widely different. In the general course of study on page 300 the outline of the college course is sufficient to indicate the work. Let us now turn back to that outline, and in imagination go with the pupils as they advance in each study. We enjoy the conduct lessons of the elementary school, the practical ethics of the high school, and the ethical philosophy of the college. As we thus go with the pupils in the several studies through the elementary school, through the high school, and through the college, we gain insight into the unity of the school and college work, and learn to think of it as a whole. We can now take up each group of schools and intelligently study its work in view of the general course of study. Such study will fit us as nothing else can to do well our respective parts in educating the race.

CHAPTER XXI.

PUPIL IMPROVEMENT THROUGH EFFICIENT RURAL
SCHOOLS.

More than half of our pupils get their entire education in our country schools. A majority of our leaders in all fields of high endeavour get their start in our rural schools. These facts indicate the tremendous importance of making these schools as efficient as possible. Inefficiency, as a rule, still characterizes the management of our rural schools.

The Story of the Country School is inexpressibly Pathetic.—History is the story of human progress, but hitherto our rural schools can scarcely be said to have made history. Even through the most marvellous decades of educational advancement our rural schools have remained comparatively stationary. As the century closes, we grieve to say it, our country schools are nowhere satisfactory. Everywhere our rural youths are systematically dwarfed. But light is breaking. County supervision is very helpful. The movements to group our rural schools and give them district supervision promises great things. In densely populated regions, transporting pupils at public expense and thus forming graded central schools is working great improvements. The uplifting of our rural schools is becoming a leading educational movement of our times.

Rural Schools may be made Efficient.—The possibility of making our country schools efficient and

progressive is no longer doubted. The stupendous difficulties are admitted, but wise organization and skilful management may surmount all hindrances. The statesman and the philanthropist study to improve our country schools as the best means of checking the alarming tendency to overcrowd our cities. The educator co-operates in all movements to improve our rural schools, because he considers that we thus do most to elevate the race.

Country Schools are necessarily Sui Generis.—Our rural schools to be efficient must be unique in organization, in management, and in methods. The environments demand the creation of a country-school system adapted to the conditions. After long years of study, observation, experiment, and consultation, the following plan is submitted. It is certainly intensely practical. It seems to embrace the conditions of constant progress. It is the faith of the author that our rural schools can and will be made efficient.

We count Rural Schools as Ungraded Schools.—The typical country school is ungraded. It has one teacher, and has pupils at all stages of elementary advancement. The ungraded schools are the least economical and the least efficient of all schools, but such schools are a necessity. Our study is to make the most of these schools. Whenever and wherever possible we plan to transform the ungraded into the partly graded school with two or more teachers. These partly graded schools, in small villages and in densely populated neighbourhoods, are a decided educational advance. Wherever possible, we plan to transform the partially graded into the graded school with a teacher for each

grade. The rural central high school may be counted as a country school. The high school is now a part of the common-school system, and must be made easily accessible to all our youths. The central high school can at the least do well the work of the first and second high-school years, and can thus do incalculable good.

COUNTRY SCHOOL GROUNDS AND SCHOOLHOUSES.

These must be adapted to the conditions. In other chapters we have studied school environments and school grounds and schoolhouses in general. Here we study these things as affecting rural schools.

1. *The Location should be Central, Beautiful, Hygienic.* In the country these are important considerations. The location should be beautiful, and this requirement may move the school a little from a central position. The location must be healthy, and hygienic environments outrank other considerations.

2. *Rural School Grounds should be Commodious.* Each rural school should have from two to five acres consecrated to pupil culture. These grounds must be made educative. The natural beauty must be supplemented by art, so as to cultivate taste and react on the home. The playgrounds must be so arranged as to encourage vigorous plays. The geography grounds must present the divisions of land and water. The biological grounds must be made helpful in Nature study. The rural school grounds should be the most delightful of all places in the community.

3. *The Ideal Country Schoolhouse is adapted to the Country School.* We create our ideal rural school and we build around it our ideal country schoolhouse.

It is commodious, for the country pupils must not be crowded. It is seated with single adjustable desks, for country pupils deserve the best. It is heated by a ventilating stove and a small open fireplace situated in opposite corners. Almost perfect ventilation is secured by the large flues, by the skilful management of the windows, and by having a recess each hour. The two doors and the convenient cloak rooms make entrance and exit easy. Storm doors open into closed walks leading to the closets, and the pupils visit the closets at will. Our ideal country schoolhouse is a thing of beauty, and it is every way adapted to the ungraded school work.

COUNTRY SCHOOL ORGANIZATION.

Each township shall constitute a school district, and the teacher of the central school shall be principal of all the schools in the district. This sentence, enacted into law and embodied in practice, will revolutionize our rural school work. It will group all schools, and will give the schools of a district organic unity and skilled management.

1. *Grouping Rural Schools into Organic Unity is Vital.* The angels could not make our country schools efficient on any other plan. In most States the municipal township is wisely made the school district. The number of schools in a district is imma-

School <input type="checkbox"/> No. 5	School <input type="checkbox"/> No. 4	School <input type="checkbox"/> No. 3
School <input type="checkbox"/> No. 6	School <input type="checkbox"/> No. 1	School <input type="checkbox"/> No. 2
School <input type="checkbox"/> No. 7	School <input type="checkbox"/> No. 8	School <input type="checkbox"/> No. 9

terial, but for convenience it is often best to divide a township into two or even three districts, and sometimes it is best to put two townships in one district. A school group should be compact, and the central school should be easy of access from all parts of the district. School No. 1 is the central school. The number of schools in a district, within reasonable limits, does not affect the management.

2. *The District School Board must be Perpetual.* The legal voters will elect three competent citizens to serve one, two, and three years as members of the school board. One member of the board will retire, and one new member will be elected each year. Thus a perpetual school board is secured. The teacher of the central school will be *ex officio* secretary of the board. In school affairs, as in everything else, our people initiate all movements and keep the management of affairs in their own hands. The Government helps the people to help themselves. The principal nominates and the board elects the teachers. With the approval of the county and the State superintendent, the board may divide the schools of a district into two or three convenient groups, each group having a central school and a principal.

3. *The Teacher of the Central School is the Principal of all the Schools in the Group.* Only trained and experienced teachers are eligible to this position. The principal is the vital element in the rural school organization. The tenure of office for principal and tried assistants is during efficiency. The principal directs the course of study and is the inspiration of the school work of the district. He works with the

county superintendent as city principals work with the city superintendent. He works with the school board to secure and keep a good teacher in each school. On alternate Saturdays the principal arranges to visit such schools as most need his help, and on alternate Saturdays he conducts the meetings of the teachers.

4. *Teachers spend Alternate Saturdays in Professional Work.* They meet at the central school and the principal conducts the exercises. One hour is spent in practical school management, and all the teachers plan to help each teacher. One hour is spent on methods. The time is devoted to the best teaching of a single branch; each teacher contributes something. One hour is devoted to the professional study in hand; a helpful book is studied and discussed. One hour at alternate meetings is given to helpful work by the county superintendent. On the last Saturday of the school month an hour is spent with the school board. The principal reads the consolidated report for the month, and each teacher receives his salary in cash, not in promises. The board and the teachers consult about the needs of the schools and the county superintendent makes suggestions.

5. *Each School has its Director.* The board appoints an interested and competent citizen to have charge of the school property, to make the improvements ordered, to supply fuel, and to co-operate with the teacher. The director holds his position during the pleasure of the board.

6. *The Central School develops into the District High School.* Usually but two years of high-school

work is advisable. The principal takes charge of the high school, and an assistant teacher takes charge of the elementary work. It is of the utmost importance to have these rural high schools accessible to all youths in the district who complete the elementary course of study.

7. *The Villages are the Natural Centers.* Separate school boards for the village school and for the surrounding rural schools are uneconomic and uneducational. In all affairs—school, church, and state—it is of the utmost importance to get the town and country people to work together. Whenever possible the village should be designated as the central school. No reasonable effort should be spared to break down and keep down antagonism. To this end the union of the schools will help most.

8. *Flexibility must characterize the Rural School Organization.* It must be easily adjustable to the conditions in all sections of the country. The above plan is in the highest degree flexible. Everywhere the people will group their schools and elect their school boards. Each school board will elect a principal, and the board and the principal will struggle with the local conditions; working together they will build up and conduct the schools. There may be infinite variations, but the vital conditions of efficiency are secured.

RURAL SCHOOL LIBRARIES AND SCHOOL APPARATUS.

Some helps are essential in order to secure the best results. The school library easily comes first. In rural homes the best books are not numerous.

The school does most when it develops a taste for the best literature and supplies free the best books.

1. *The Principal is Librarian.* Each teacher is an assistant librarian. In the central building a room is fitted up for the district library. The county superintendent approves the lists of books to be purchased. The library is free to all persons in the district. Juvenile books predominate, but there are suitable books for all. The library is rich in the best books for teachers.

2. *The School Library continually grows.* The State makes a small annual appropriation for sustaining each district library. The school board also appropriates a small amount annually. A course of lectures is given annually at the central school and the proceeds go to the library. Liberal men and women make helpful contributions.

3. *Each School has its Small Working Library.* These libraries are reported as a part of the district library and are in charge of the teacher. An unabridged dictionary, a suitable encyclopædia, and a few choice books of reference are the essentials. Besides these, each teacher has a special working library. On alternate Saturdays, while attending the teachers' meetings, the teacher procures special books for the pupils and for the working library.*

4. *Necessary Apparatus is furnished each School.* The most helpful things are procured, but nothing is purchased without the approval of the principal and the county superintendent. Country pupils live close

* See Chapters VII and IX.

to Nature and learn to make things, but some articles of apparatus are exceedingly helpful. As with books, so with apparatus: our rural youths are entitled to the advantages of suitable aids. Only the best helps are secured. The teacher is charged with the care of the apparatus.

ADVANTAGES AND DISADVANTAGES OF RURAL SCHOOLS.

1. *The Country School may claim some Decided Advantages.* The pupils live nearer to Nature than city pupils, have greater physical vigour, have gained better working habits, and are less exposed to vicious temptations and to hurtful excitements. The worthy country teacher is a closer friend of his pupils and a more pervading force in pupil life. As a rule, rural pupils are more independent and self-helpful. These advantages count for much. Our rural schools, at their best, do in eight months the work that city schools do in ten months.

2. *The Country School has its Serious Disadvantages.* Irregular attendance, short terms, low salaries, incompetent teachers, frequent changes of teachers, opposition to improvements, wretched school facilities—these are some of the obstacles we must encounter in our efforts to improve rural schools. Then, one teacher is compelled to instruct the eight grades of pupils in all the different branches. As in primitive times the farmer was blacksmith and shoemaker and carpenter as well as farmer, so the country teacher must do all the work divided between the eight teachers of a graded school. But most of the disadvantages may

be removed or so modified as to work less and less injury. Our ungraded country schools are a necessity. In these schools we instruct fully half of all our pupils. To make our country schools the best possible is our great educational desideratum.

CLASSIFICATION IN UNGRADED SCHOOLS.

1. *A Class is a Group of Pupils capable of working together.* Age, abilities, and attainments are considered in arranging pupils into working groups. The vital test is, "Can this pupil work with most profit in this class?" Before deciding, the teacher, as best he can, studies the pupil. Very much depends on the decision. Teachers lacking pupil insight, like unskilful physicians, may make fatal blunders.

2. *The Ungraded School should be classified in view of the Graded School.* Our people are continually moving from country to town and from town to country. We must so organize our schools that these changes may not interrupt the work of the pupil. Then our ungraded schools tend to become partially graded schools, and these gradually grow into fully graded schools. The classification of the rural schools must facilitate these transitions.

3. *The Four-class Grouping seems best.* The four-class plan is believed to be the best possible. It makes it easy for the schools as well as for the pupils to pass into graded schools; its school advantages are manifold.

The pupils are grouped into four classes, designated by the letters A, B, C, D. Each class stands

for two years of school work. Class D includes the first- and second-grade pupils of the graded school; class C, the third- and fourth-grade pupils; class B, the fifth- and sixth-grade pupils; class A, the seventh- and eighth-grade pupils. As a rule, the country pupils in a class are a few months older than the city pupils in corresponding grades. The tendency, as rural schools improve, is toward correspondence in age.

4. The Work of the Unified School is limited to elementary studies. The study, the program, the plans of work, the course of grammar, and the Ele-
mentary work are projected in limitation. Rural schools are often embarrassed by attempting advanced work. As this should be discouraged, the elementary work should command the entire energies of the teacher. In some cases the teacher is justified in instructing advanced pupils before and after regular school hours. In very small schools such instruction may safely be given during the school hours. It is every way better to promote advanced pupils to the central high school.

Rural School Study Groups.

System is the condition of efficiency. We select the minimum number of the best studies and arrange them in coordinate groups. Continuous lessons in each group are required to prepare the pupils for

complete living, and at the same time prepare them for advanced school work.

RURAL SCHOOL	1. CONDUCT STUDIES.	{ Special conduct lessons, Oral history, oral civics, Oral natural lessons.
	2. LANGUAGE LITERATURE STUDIES.	{ Reading and spelling, language lessons, grammar, composition, Chic literature, juvenile literature.
	3. SCIENCE STUDIES.	{ Geography, oral biology, hygiene, Oral physics, oral astronomy.
	4. MATHEMATICS STUDIES.	{ Arithmetical, concrete geometry, Introductory algebra, oral bookkeeping.
	5. ART STUDIES.	{ Physical culture, vocal music, Penmanship, drawing, manual training.

The grouping is easy, natural, practical. The country teacher studies these groups as a map of his work. He asks, "How can I best weave these subjects into my course of study and my programme?" The course of study expresses in years the combination of the study groups; the programme expresses the same thing in days. Good teaching correlates the various studies and unitizes the work.

COURSE OF STUDY FOR RURAL SCHOOLS

1 The Prolonged Study of a Few Subjects is the True Plan. The course of study for rural schools must exclude many subjects in order that pupils may master a few subjects. We study the Report of the Fifteen as a mine of educational wealth, and find its matter and its suggestions invaluable. We study the country school in its history, in its environments, and in its possibilities. In the light of the world's thought and experience we study to create a course of study adapted to rural schools.

Course of Study for Ungraded Rural Schools.

CLASSES.	Study groups.	Subjects.	Periods	Time.
D. I and II years.	Conduct. Language-Literature. Science. Mathematics. Art.	School duties, manners, historic stories, moral virtues, Reading, spelling, language lessons, child literature, Oral geography, oral biology, hygiene, oral physics, Oral arithmetic, form lessons, Writing, drawing, vocal music, physical culture, manual training.	5 10 5 5 10	15 15 15 15 15
III and IV years.	C. Language-Literature. Science. Mathematics. Art.	School duties, conduct lessons, historic stories, Reading, spelling, language lessons, child literature, composition, Primary geography, oral biology, hygiene, oral physics, Primary arithmetic, form lessons, Writing, drawing, vocal music, physical culture, manual training.	5 10 5 5 10	15 15 15 15 15
V and VI years.	B. Language-Literature. Science. Mathematics. Art.	Conduct lessons, history, civic lessons, mind lessons, Reading, spelling, language lessons, literature, composition, Geography, oral biology, hygiene, oral physics, Oral and written arithmetic, concrete geometry, Writing, drawing, vocal music, physical culture, manual training.	5 10 5 5 10	25 25 25 25 25
VII and VIII years.	A. Language Literature. Science. Mathematics. Art.	Conduct lessons, history, civic lessons, mind lessons, Reading, literature, composition, grammar, Latin or German begun, Geography, oral biology, oral physics, oral astronomy, Arithmetic, introductory algebra, concrete geometry, oral book-keeping, Writing, drawing, vocal music, physical culture, manual training.	5 10 5 5 10	25 25 25 25 25

2. The Work is Progressive.—It is apparent that each class is kept in touch with the great departments of human learning. The same subjects are studied throughout the eight years, but each class studies a special phase of a subject. The number lessons of the D's become the algebra lessons of the A's, and the historic stories of the D class become the lessons in American and general history of the A class. Continuous and progressive work characterizes well-arranged school courses.

3. The Recitation Periods.—School exercises conducted by the teacher are called recitations. The course provides for one daily recitation in each study group. Necessarily the language-literature and the art groups are given two daily recitation periods. Each pupil has seven recitation periods daily.

4. Length of Recitations.—Efficient work requires time. Even in the country school fifteen minutes seems to be minimum time for good work. In practice we find that in the D and C classes we can do reasonably satisfactory work in fifteen minutes; but we find it wise to make the recitation time for the B and A classes twenty-five minutes.

THE COUNTRY-SCHOOL PROGRAMME.

1. Efficient Work comes of a Good Programme.—The difficulties are immense. One teacher must do the work of the eight teachers in the graded school. No wonder that most programmes for ungraded schools are crude! Few teachers profoundly study the conditions, and so fail to form a good working programme. As a result, the time and the energies of

teacher and pupils are squandered. The programme here submitted is the result of years of thought and experience. The author has visited several hundred country schools and earnestly studied the rural school work in many of our States.

2. Combined Recitations are a Necessity.—An ungraded school has, we will say, forty pupils. The classification gives us fifteen D's, eleven C's, eight B's, and seven A's. How may one teacher best manage all this class work? Experience answers, "Make judicious combinations." (1) Let the art work include as far as possible all the classes. The teacher can have all at work at the same time and still adapt the work to the classes. (2) Combine the A's and B's in most subjects. These classes are always small. The reviews and much advanced work may be made to suit both classes. While the A's are doing written work the B's may have oral work. (3) In the conduct work combine the D's and C's and the B's and A's. This combination is especially helpful. Such class combinations often more than double the efficiency of the rural teacher.

3. There is Immense Gain in Concentration.—The entire school concentrate on one study. While the D's recite arithmetic all the other classes study arithmetic. While the C's recite geography all the other pupils study geography. This device is decidedly helpful. The teacher who once tries it will always use it. It is the only possible plan that can make it easy for the teacher to manage the study classes as well as the recitation work. In the programme, blackfaced type indicates recitation and common type indicates study.

Suggestive Programme for Ungraded Schools.

Min.	Classing time.	Class D.	Class C.	Class B.	Class A.
10	9.00	OPENING EXERCISES.			
15	9.15	Oral arith. or form.	Primary arith.	Arithmetic	Arithmetic,
15	9.30	Oral arith. or form.	Arith. or form.	Arithmetic	Arithmetic,
25	9.55	Reading lesson	Primary arith.	Arithmetic	Arithmetic.
10	10.05	RECESS.			
15	10.20	Reading, spelling.	Lang. & comp.	Lang. & comp.	Gram. & comp.
15	10.35	Reading, spelling	Lang. & comp.	Lang. & comp.	Gram. & comp.
25	11.00	Seat work.	Lang. & comp.	Lang. & comp.	Gram. & comp.
10	11.10	RECESS.			
15	11.25	Geog. or biology.	Geog. or biol.	Geog. or biol.	Geog. or biol.
15	11.40	Geog. or biology	Geog. or biol.	Geog. or biol.	Geog. or biol.
25	12.05	Seat work or play.	Geog. or biol.	Geog. or biol.	Geog. or biol.
30	12.35	NOON RECESS.			
15	12.50	Music.	Music.	Music.	Music.
25	1.15	Writing or drawing.	Writing or drawing.	Writing or drawing.	Writing or drawing.
15	1.30	Physical culture.	Phys. culture.	Phys. culture.	Phys. culture.
10	1.40	RECESS.			
15	1.55	Reading, spelling.	Read. spell.	Reading.	Reading.
15	2.10	Reading lesson.	Read. spell.	Reading.	Reading
25	2.35	Seat work	Reading.	Read. or lit.	Read. or lit.
10	2.45	RECESS.			
15	3.00	Conduct lesson.	Cond. lesson.	Cond. or hist.	Cond. or hist.
25	3.25	Dismiss	Dismiss.	Cond. or hist.	Cond. or hist.

4. The D Class is divided into Sections One and Two.—Except in reading, the two sections are combined. In reading, while the teacher instructs one section a pupil from class A instructs the other section ; but the teacher will have both sections daily, as the D's have two lessons in reading each day. As the language lessons and the science lessons are also reading lessons, the D's are well provided for.

5. The Hourly Recess is exceedingly Helpful.—It helps to secure good ventilation, keeps the pupils fresh and happy, and makes control much easier. It enables teacher and pupils to accomplish daily at least one third more work. For the country school the hourly recess is of special educational value.

6. A Pupil Teacher may render Needed Assistance.—In large country schools the best of all devices for relieving the overworked teacher is the provision for a pupil assistant. Many young teachers wish practice under skilful guidance, and will gladly take the place of pupil assistant. Many school boards will freely provide some compensation.

7. Grouping the Studies is an Incalculable Help.—The programme articulates the study groups. Such a programme is a work of art and pleases like a poem. It places each pupil in continuous touch with each of the realms of human learning. The practical grouping of the school studies renders the making of school programmes a real art.

THE THREE-GROUP PROGRAMME.

Teacher, study carefully the three-group programme. It is full of helpful suggestions. It is sim-

ple and comprehensive. It is used with good results in various States. Visit good ungraded schools and observe the workings of different programmes. Study earnestly your own school and create your own programme. The course of study and the programme are fundamental in school work. The following suggestions by Dr. E. E. White will prove of great value to you. To prevent confusion, *group* has been substituted for *grade* in these paragraphs; the grade programme is for a typical ungraded school.

1. The programme of class exercises and seat work shown on the next page is adapted to a school divided into the three sections or groups. The class exercises are indicated by bold-faced type, and the study or seat work by common type.

2. The programme divides the day session into periods of twenty, twenty-five, and thirty minutes each, the spelling drills in the two upper grades being considered one period. It also divides the teacher's time equitably among the three groups of pupils. In the forenoon the A group has three exercises; the second or B group, two exercises; and the primary or C group, two exercises. In the afternoon the A group has three separate exercises (including spelling); the B group, two exercises; and the C group two. All three groups have two simultaneous exercises, one in writing and language and one in drawing, singing, etc. It is thus seen that the A group of pupils has eight exercises each day, the B group six exercises, and the C group five; but it is to be observed that the A group has two more studies than the B, and the B group has one more than the C. The attention given to the preparation and direction of the seat work of the pupils in the C group (as explained below) will make the time devoted to this group about the same as that devoted to the B group.

3. A rural school of some thirty pupils would probably have two classes in the A group, two in the B group, and three in the C group, making, in all, seven different classes of pupils. The time allotted by the programme to a class exercise in the A group—in arithmetic, for example—must be divided between the two classes (if there be two classes in a group), but not equally from

White's Three-Group Programme.†

CLOSING TIME	MINUTES	PRIMARY (C) (GRADES I & II)	SECONDARY (B) (GRADES III & IV)	ADVANCED (A) (GRADES V, VI, VII & VIII)
OPENING EXERCISES				
9.10	10			
9.35	25	Seat Work*	Arithmetic	Arithmetic
10.00	25	Number (On slate or with objects)	Arithmetic	Geography
10.25	25	Number	Geography	Geography
10.45	20	Form Work (Paper folding, stick laying, etc.)	Geography	Geography
10.55	10		RECESS	
11.15	20	Silent Reading	Geography	Grammar
11.35	20	Reading and Spelling	Form Work (Map drawing, sand molding, etc.)	Grammar
12.00	25	Excused from School	Reading	Grammar
NOON INTERMISSION				
1.10	10			✗
1.30	20	Form Work (Clay modeling, paper cutting, etc.)	Reading	Reading
1.50	20	Silent Reading	Seat Work*	Reading
2.10	20	Reading and Spelling	Animal or Plant Study	U. S. History or Physiology
2.40	30	Writing ² or Language ²	Writing ² or Language ³	Writing ² or Language ³
2.50	10		RECESS	
3.10	20	Number (On slate or with objects)	Spelling	U. S. History or Physiology
3.35	25	Drawing ² ; Singing ² ; or Moral Instruction. ¹	Drawing ² ; Singing ² ; or Moral Instruction. ¹	Drawing ² ; Singing ² ; or Moral Instruction. ¹
3.50	15	Excused from School	Spelling	Spelling
4.00	10		Arithmetic	Spelling

* As may be provided for by the teacher.

† White's School Management, p. 90, American Book Company. Is inserted by permission of the author and the publisher.

NOTES.—The small figures at right indicate the number of lessons a week.

day to day, as much depends on the nature of the lessons. One day the upper class may have only ten minutes and the lower class fifteen, and the next day this may be reversed. What the programme requires is that the two exercises do not together exceed the time assigned to the group.

4. The primary group presents the most difficulties, since it usually contains more classes than the upper groups; but the classes are small and the lessons are short, and very effective work can be done with three small primary classes in from twenty to twenty-five minutes. The teacher will need to take a few minutes before school to prepare seat work for them, and a minute or two may now and then be taken from the time of the upper grades to start them in such work. Some capable pupil may often be assigned to assist primary pupils. If neither history nor physiology is a regular branch of study, one more daily period may be assigned to the primary classes, and the same may be done if neither drawing nor music is regularly taught.

5. The inexperienced teacher may not see how three groups of pupils may be taught simultaneously in drawing, or writing, or language, each grade having its appropriate lesson, as provided for in the programme, but experience has solved this difficulty.

THE RURAL SCHOOL FACULTY.

The isolated school and the isolated teacher belong in the past. In our time schools are grouped, and teachers are organized into faculties. "Country school faculty!" Yes, my friend, the colleges must not have all the good things. A group of rural teachers working together as a unit, by extending the meaning of the term a little, may properly be called a rural school faculty.

1. *The principal* is a specialist in rural school work. He is the professional adviser of the school board and the right arm of the county superintendent. He gives unity and intelligent direction to the school work of the district. Above all, he unites the teachers

into a working faculty, and thus unitizes the school work of the district.

2. *The assistant teachers*, with the principal, constitute the rural school faculty. As a working body, they plan and carry on the school work of the district. The course of study and the programme must leave details to be worked out by the faculty.

3. *The faculty meetings* occur on alternate Saturdays, and are counted a part of the regular school work. All enter heartily into these councils. Each one gains inspiration and also contributes something to help others. These faculty meetings are of the highest value; they will revolutionize the rural schools.

PARTIALLY GRADED COUNTRY SCHOOLS.

Partially Graded Schools.—The ungraded school is the crudest and least economical form of school organization. Whenever and wherever possible the ungraded school must be evolved into the partially graded school. At first we have a principal and one assistant. The principal takes the A and B classes, the four intermediate grades, and the assistant takes the C and D classes, the four primary grades. The schools are now designated as the primary and the intermediate. Experience demonstrates a large gain by this partial grading. Each teacher added multiplies the gains. The transformations must be so adjusted as to give each teacher as nearly as possible an equal number of pupils. Often the principal must take into his room a lower class in order to equalize the work.

At best the graded organization is defective, but it is doubtless the highest form admissible in country

schools and primary schools. The most rudimentary form of the graded school is doubly as efficient as the ungraded school. Ultimately some way will be found to largely transform the ungraded into graded schools. Massachusetts for some years, by furnishing free transportation, has given the country pupils the same advantages as the city pupils. The children within a radius of four and a half miles are transported in wagons to and from central schools. The result is so satisfactory that comparatively few ungraded schools are now to be found in the State. Other States are moving in the same way, and doubtless each State will devise some plan to make its rural schools better and better.

THE RURAL HIGH SCHOOL.

The District Central School evolves into the District High School.—This development comes naturally from conditions, and is the crown and summit of rural school organization; it brings within the reach of all our youths high-school instruction. Country youths do not mind travelling on bicycle, horse, or mule even six and seven miles to attend a good high school. At present only three pupils out of a hundred enter our high schools. Place the high school within easy reach of every home, and we may safely hope to see within a decade at least twenty-five per cent of our youths enter the high school. The gain every way will be marvellous. The district principal becomes also the high-school principal, and his assistant takes the elementary pupils. In these schools two years of high-school work may be done to the immense advantage of rural youths and at the minimum cost.

METHODS OF WORK IN COUNTRY SCHOOLS.

1. *The Best for Each Pupil must be planned.*

No pupil, even in ungraded schools, must be kept back or pushed forward to his hurt. As the very best practical device to secure efficiency, the pupils are placed in four classes, and each class is divided into sections one and two. Teachers must keep in mind that section one is a year in advance of section two. In some studies the sections can work together profitably; in other studies, such as arithmetic, the sections must be given different work. To keep the advanced pupils *marking time*, or to drive the least advanced pupils to *despair*, is ruinous. To keep each pupil doing continuously his best is extremely difficult, but it must be done. In some cases a pupil assistant is the best solution. Some teachers get good results through alternate recitations. The most satisfactory device, as a rule, is the combined recitation; the sections are given alternately oral and written work.

2. *There must be More Study and Less Teaching.*

This is simply a necessity in ungraded schools. The pupil must be educated to work out his own salvation. Sturdy independence and self-helpfulness are peculiar products of the rural school. Pupils are trained to find out for themselves. The conditions are such that the pupils must depend largely on their own efforts, but the teacher continually suggests, guides, inspires, instructs.

3. *There must be More Text-book Work and Less Oral Teaching.* The recitation periods are necessarily

shorter, and the pupils must do more home study. The one teacher can not possibly do extended oral work in all the subjects; but the pupils are from one to two years older than in the corresponding classes of the graded school, and the rural industries in which the pupils engage and their closer associations with Nature, help to render more good bookwork possible. The teacher, it is true, supplements the book and shows the pupil how to gain knowledge from Nature and from books, but he is compelled to limit extended oral work to a few subjects. The school library is of the greatest value in the country school. The pupils are trained to find out from books.

[The Report of the Committee of Twelve on Rural Schools is adopted as a supplement to this chapter.]

CHAPTER XXII.

PUPIL IMPROVEMENT THROUGH EFFICIENT KINDERGARTENS AND PRIMARY SCHOOLS.

INTELLIGENT pupil study characterizes the new education. Physiologists, psychologists, and educators have taught us to study the child in the light of science. Each teacher studies the little ones for herself. She lives close to her pupils, and she finds that love of children is the divine key to child nature. She is able to lead her pupils to mastery through glad effort, for she is their wise and loving friend. Her work and her methods are based on a knowledge of the real child. Knowing child activities and child

needs and the laws of child growth, she wisely adapts the matter and the methods to her pupils. God and the mothers give the precious children into her hands, and lovingly she leads them in the paths of peace.

THE KINDERGARTEN AND THE PRIMARY SCHOOL.

Play characterizes childhood and is the central idea in the kindergarten. Jean Paul thought of play as man's first poetry, and the instrument through which all his higher possibilities are developed. Froebel is counted the great educational reformer because he planned to make play educative. In 1816 he created the embryo kindergarten; by 1916 the kindergarten will have become co-extensive with the primary school.

1. *From the Fourth to the Sixth Year is the Kindergarten Age.* The mothers are God's kindergartners; every wise mother studies to make the play of her little ones educative, but the child of four needs the larger life of the kindergarten. In cities it is wise to gather the neglected infants into kindergartens as early as the third year.

2. *Kindergarten embodies the Philosophy of Education.* The wise and kind kindergartner works with God and the mothers to make the most of the precious infants. The little ones are kept as free and as happy as the birds. They are gently led to explore, to see, to hear, to taste, to smell, to touch, to do. New and old experiences are assimilated and remembered. Making new combinations educates child imagination. As flowers bud and blossom, so the kindergarten pupils grow physically, mentally, and

morally. All right habits are cherished. All exercises increase strength because they are proportioned to the strength of the pupils. The growth is symmetrical because all the native activities are wisely exercised.

3. *A Warm Motherly Heart is the Kindergarten's Divine Commission.* Culture is essential. Profound child study is a *sine qua non*. Good scholarship and at least two years of professional work under the training of skilled kindergartners is indispensable. The kindergartner is an artist of the highest rank, and requires even more preparation for her work than the musician or the painter or the sculptor. Her skill awakens all that is lovely in the immortal child.

4. *We are Rich in Kindergarten Literature.* Froebel's Education of Man easily heads the list; then Miss Blow's Symbolic Education and her songs and music of Froebel's Mother Plays; Hailman's Kindergarten Manual and Primary Helps; Froebel's Pedagogies of the Kindergarten, by Miss Jarvis; and the current kindergarten literature.

5. *Semi-kindergarten Work characterizes the First Primary Grade.* The transition from the home or kindergarten to the school is made in this grade. Semi-kindergarten work renders the transition natural and helpful. The child is now six years old and may profitably, after a few weeks, begin to use books, but the kindergarten spirit is dominant. The children are still largely educated through play, and are led to experience everything possible. The teacher is too sensible to use many of the gifts and plays devised

for the younger pupils. The infant is now a child and must be given child work. The play impulse is strong, but the plays are different. The pupils feel free and happy, but they learn to work orderly. The semi-kindergarten has been a gradual growth. The most gifted teachers have been selected for this grade at advanced salaries. Thus it has come about that the old first grade primary has been imperceptibly transformed into the semi-kindergarten, to the incalculable advantage of the pupils.

THE PRIMARY SCHOOLHOUSE AND PRIMARY HELPS.

Nothing is too Good for the Child.—Froebel taught his embryo kindergarten in a hovel without a floor or a door or a stove. To-day the kindergarten home is a child palace, full of delights. The old schoolhouse was repulsive and bare, and the work corresponded. No wonder parents had to force their children to go to school! In our times the primary school with its surroundings and its furnishings is a thing of beauty, and the primary pupils are the happiest of mortals.

1. *We must build our Ideal Primary Schoolhouse around our Ideal Primary School.* The typical primary building has four rooms—one room for each grade. Some schools have eight primary rooms, and a teacher for each primary class. Large primary schools are not desirable. It is better to have four-room buildings near the homes of the pupils. Massing young children is an educational mistake.

2. *Primary Buildings should be Hygienic.* The lighting and heating and ventilating should be as nearly as possible perfect. The physical-culture hall

should be ideal; it should be so placed as to be convenient for both the primary and intermediate. In detached primary buildings wide halls answer for gymnastic purposes.

3. *A Primary Schoolroom must be fitted up for Primary School Work.* The kindergarten realizes our ideal, and so should the primary schoolroom. The single adjustable desks are educative as well as hygienic. The table for moulding and weighing and measuring is indispensable. Suitable apparatus is more needed in the primary than in any other school. The primary room should be a picture gallery.

4. *The Primary Library should be the Best.* In each primary room is a revolving bookcase containing a hundred child books adapted to the grade. The primary faculty select the books and plan for their use. We are becoming so rich in primary literature that we are embarrassed in selecting the best.

THE PRIMARY FACULTY.

1. *The Primary Faculty is an Organic Educational Unit.* A primary school is complete in itself. Its principal and her assistants constitute the primary faculty. The principal is the unitizing element. She conducts the faculty lessons in child study and in primary methods. All members of the primary faculty are familiar with the work done by each; all work as a unit in promoting child growth. The primary tenure of office for tried teachers is during efficient work.

2. *The Primary Principal is a Specialist in Primary Work.* For this reason she is made prin-

cipal. She is charged with the primary control and the primary teaching. Besides teaching the fourth grade, she inspires her assistants and unitizes the entire primary work. She keeps the primary school in touch with the kindergarten on the one hand, and with the intermediate on the other. She so manages that the primary work is enriched by the visits of the intermediate specialists. In all cases she works in harmony with the intermediate principal.

3. *Each Primary Assistant is a Primary Specialist.* Each one is elected because she is a gifted and trained primary teacher. The educational world has come to demand the best ability and the highest skill in the primary school, and salaries have been increased to correspond with this demand. Each teacher works in complete harmony with the principal.

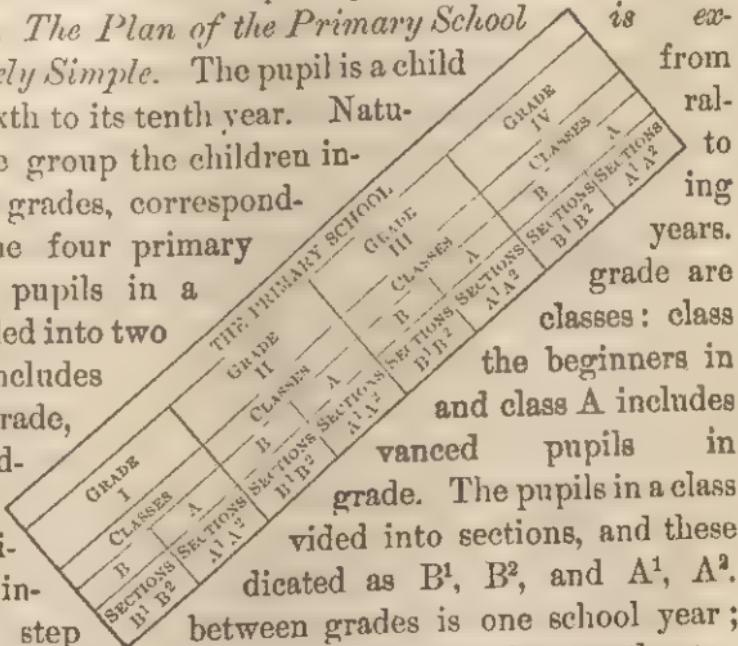
4. *The Primary Work is unitized.* The principal and her assistants at their weekly meetings study systematically the primary work. Two choice books each year are studied and discussed. The work of each grade is studied and its relations to the work of other grades, and its programme are carefully considered. To teach the best things in the best ways is the ideal. But unity of work is the *desideratum*. The child mind is a unit, and the child world must be a unit. The great study of the teachers is to lead the children to assimilate their acquisitions into their lives and thus into unity. Number lessons are blended with the language lessons and with the Nature lessons. All lessons supplement and re-enforce each lesson, just as in the mental economy all the native activities of self supplement and re-enforce each activity. The

work of each teacher harmonizes with the work of all the teachers. The primary work is an organic unit. The tremendous importance of correlation and concentration is beginning to be realized.

ORGANIZATION OF THE PRIMARY SCHOOL.

1. *The Primary School is Sui Generis.* It is the pleasant school home of childhood. The pupils require personal help. School evolution carries up into the graded primary school the best in individualism, the best in classification and gradation, but wisely stops short of specialization. The primary is strictly a graded and classified school, and this is the highest stage of its educative development. Specialization hurts and does not help the primary school.

2. *The Plan of the Primary School is extremely Simple.* The pupil is a child from its sixth to its tenth year. Naturally we group the children in four grades, corresponding to the four primary years. The pupils in a grade are divided into two classes: class A includes the beginners in the grade. The pupils in a class are divided into sections, and these are indicated as B¹, B², and A¹, A². The step between grades is one school year; the step between classes is half a school year; the step between sections is one fourth of a school year.



Where the school year is divided into four terms the above plan is considered best. Where the school year is divided into three terms it is doubtless better to divide the pupils in each grade into three classes, B, M, and A ; B including the beginners, M the middle class, and A the advanced class. The interval between classes in schools thus organized is one third of the school year. The four-group plan is more flexible, and has decided advantages in combining recitations and in making promotions.

3. *Pupils are Promoted by Classes semi-annually or quarterly.* Promotion by classes occurs at the close of each half year; the B's in a grade become the A's, and the A's in a grade become the B's of the next grade. Where classes are divided into sections with reference to advancement, promotion occurs at the close of each quarter. The primary principal, assisted by the teachers, places each primary pupil in the proper grade, and the teacher of a grade places her pupils in the proper classes. Fitness to do well-advanced work warrants individual and class promotions. Whenever the teacher becomes satisfied that a pupil will be benefited by promotion to a higher class the faculty makes the change. In most cases it is found best to give bright pupils additional work, and thus have them advance with their classes. The teacher of the grade makes all promotions within her grade, but the primary faculty makes all promotions to advanced grades on the recommendation of the teacher. The intermediate principal, on the recommendation of the primary principal, promotes individuals and classes from the primary to the intermediate school.

4. *Individual Teaching is a Desideratum in Primary Organization.* Forty pupils may be considered the limit of efficiency. This limit gives the primary class of twenty and the section of ten pupils. With a group of ten, the teacher is able to treat each pupil as an individual, and combine the best individual with the best class work.

COURSE OF STUDY FOR PRIMARY SCHOOLS.

Lines of work are indicated, but details are necessarily left to the insight and skill and inspiration of the teachers. Mechanical routine and slavish lesson hearing are utterly out of place in all schools, but more especially in the primary school. At the best and at the worst, detailed courses of study for the primary grades must be taken as suggestive; primary faculties must work out the applications.

1. **The Primary Study Groups outline the Primary Work.** -The studies are the same, but the work is limited to the child phase of the studies.

PRIMARY GROUPS OF STUDIES.	CONDUCT GROUP OF STUDIES.	School government, how to study. Conduct lessons, oral history.
	LANGUAGE-LITERATURE GROUP OF STUDIES.	Reading, language lessons. Child literature, composition.
	SCIENCE GROUP OF STUDIES.	Oral geography, primary geography. Oral biology, oral hygiene.
	MATHEMATICS GROUP OF STUDIES.	Oral arithmetic, primary arithmetic. Form lessons.
	ART GROUP OF STUDIES.	Writing, drawing, vocal music. Manual training, physical culture.

Course of Study for Primary Schools.

I Grade.	Conduct.	Conduct lessons, study habits, historic stories.
	Language-literature.	Reading, language lessons, child literature, composition.
	Science.	Oral geography, oral biology.
	Mathematics.	Oral arithmetic, form lessons.
II Grade.	Art.	Writing, drawing, vocal music, physical culture, manual training.
	Conduct.	Conduct lessons, historic stories.
	Language-literature.	Reading, language lessons, child literature, composition.
	Science.	Oral geography, oral biology, oral hygiene.
III Grade.	Mathematics.	Oral arithmetic, form lesson.
	Art.	Writing, drawing, vocal music, physical culture, manual training.
	Conduct.	Conduct lessons, study, oral history, oral civics.
	Language-literature.	Reading, language lessons, composition, child literature.
IV Grade.	Science.	Primary geography, oral biology, oral hygiene, oral physics.
	Mathematics.	Primary arithmetic, form lessons.
	Art.	Writing, drawing, manual training, music, physical culture.
	Conduct.	Conduct lessons, study, oral history, oral civics.
	Language-literature.	Reading, language lessons, composition, child literature.
	Science.	Primary geography, oral biology, oral hygiene, oral physics.
	Mathematics.	Primary arithmetic, form lessons.
	Art.	Writing, drawing, manual training, music, physical culture.

These co-ordinate groups give in perspective the primary work, and furnish a basis for the course of study and the programmes.

2. The Primary Course of Study is Simple and Flexible.—It must never be stereotyped. Its purpose is suggestive. Its aim is to secure well-planned work

by keeping the pupils in touch with the great departments of human learning.

It is the true policy to leave each primary faculty free to work out their specific courses of study and construct their own programmes. The general course of study leaves unlimited scope for invention and betterment.

3. **Primary Programmes must be adapted to the Grades.**—The ablest educators will scarcely venture to submit even suggestive primary programmes. This work must always be left to the primary faculty. Variety, brevity, efficiency, are the essentials. Efficiency means the mastery of a few things, and healthful and vigorous growth. Class periods vary from fifteen to twenty minutes. The no-recess experiment proved a signal failure. The policy of having a recess of ten minutes each hour for the primary grades is thoroughly sound. Where buildings are properly arranged, hourly recesses help to secure good ventilation and wonderfully help to keep the pupils fresh and happy. Frequent recesses make the control much easier. Well-managed recreations increase efficiency.

4. **Primary Programmes must not be fixed.**—The ideal primary-school programme is exceedingly flexible and so adaptable. The programme is made for the pupils; the principal and her assistants are always ready to make desirable changes. A suggestive programme for a primary grade is submitted more to indicate a plan for creating artistic primary programmes than for actual primary work; it is safe to leave the making as well as the adjusting of the programmes in the hands of the primary teach-

Suggestive Programme for Primary Schools.

GRADE IV.

H. M.	Closing time.	CLASS B.		CLASS A.	
		B ¹ .	B ² .	A ¹ .	A ² .
10	9.10	OPENING		EXERCISES.	
15	9.25	Reading.	Reading.	Reading.	Reading.
15	9.40	Reading.	Reading.	Reading.	Reading.
15	9.55	Reading.	Reading.	Reading.	Reading.
15	10.10	Reading.	Reading.	Reading.	Reading.
10	10.20			RECESS.	
20	10.40	Writ. or draw.	Writ. or draw.	Writ. or draw.	Writ. or draw.
15	10.55	Phys. culture.	Phys. culture.	Phys. culture.	Phys. culture.
15	11.10	Vocal music.	Vocal music.	Vocal music.	Vocal music.
10	11.20			RECESS.	
20	11.40	Geog. or biol.	Geog. or biol.	Geog. or biol.	Geog. or biol.
20	12.00	Geog. or biol.	Geog. or biol.	Geog. or biol.	Geog. or biol.
20	12.30			NOON RECESS.	
15	12.45	Arith. or form.	Arith. or form.	Arith. or form.	Arith. or form.
15	1.00	Arith. or form.	Arith. or form.	Arith. or form.	Arith. or form.
15	1.15	Arith. or form.	Arith. or form.	Arith. or form.	Arith. or form.
15	1.30	Arith. or form.	Arith. or form.	Arith. or form.	Arith. or form.
10	1.40			RECESS.	
20	2.00	Lang. or lit.	Lang. or lit.	Lang. or lit.	Lang. or lit.
20	2.20	Lang. or lit.	Lang. or lit.	Lang. or lit.	Lang. or lit.
10	2.30			RECESS.	
20	2.50	Cond. or hist.	Cond. or hist.	Cond. or hist.	Cond. or hist.
20	3.10	Cond. or hist.	Cond. or hist.	Cond. or hist.	Cond. or hist.

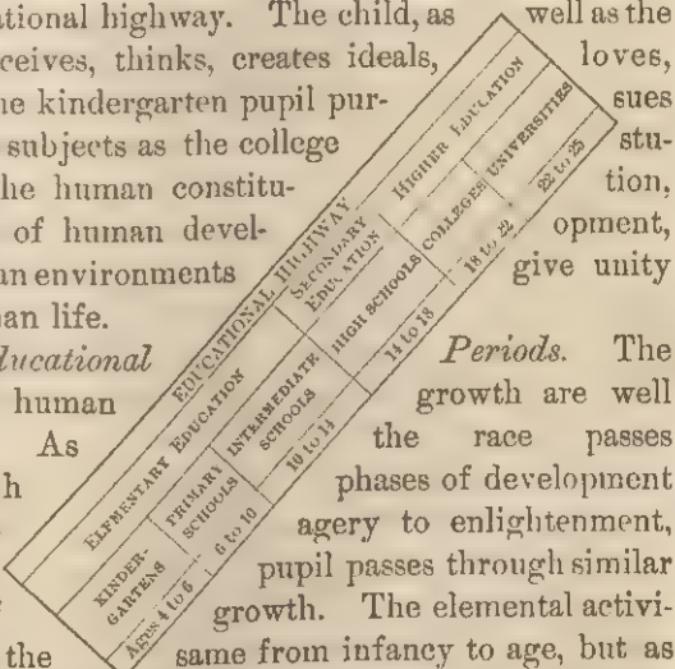
ers. Superintendents and intermediate principals will do well to confine themselves to general suggestions. The ideal primary school, like the kindergarten, is unique and complete in itself. Its faculty plans and executes.

CHAPTER XXIII.

PUPIL IMPROVEMENT THROUGH CORRELATED AND SPECIALIZED INTERMEDIATE SCHOOLS.

Pupil Growth is Continuous.—There is no break in the educational highway. The child, as well as the man, perceives, thinks, creates ideals, loves, acts. The kindergarten pupil pur- the same subjects as the college student. The human constitu- the laws of human devel- and human environments to a human life.

1. *Educational stages of human development.* As through from sav- so the stages of



Periods. The growth are well the race passes phases of development agery to enlightenment, pupil passes through similar growth. The elemental activi- ties are the same from infancy to age, but as the years go by the feeble activities of the child become the mighty activities of the man. The difference between the child Newton puzzling over his first

easy problems and the philosopher Newton solving the problems of the universe is a thing of growth. The same subjects, it is true, are studied, but the phases of the subjects, as well as the methods of work, vary as the pupils advance.

2. *Each Group of Schools is Unique.* Each stands for a stage of pupil development. The kindergarten stands for infancy; it utilizes play, familiarizes spoken and pictured symbols, and adapts matter and methods to the little ones. The primary stands for childhood; it makes close connection with the kindergarten, utilizes written symbols, and adapts the matter and the methods to the children. The intermediate stands for boyhood and girlhood; it makes close connection with the primary, utilizes the restless activities of the intermediate pupils, and adapts the matter and the methods to girls and boys. The high school stands for youth; it makes close connection with the intermediate, utilizes exploration and investigation, and adapts the matter and the methods to youths. The college stands for young manhood and young womanhood; it makes close connection with the high school, utilizes research, and adapts the matter and the methods to young men and women.

3. *School Evolution has had its Stages of Development.* Individualism characterized the crudest form of school work. The ancient schoolmaster instructed his pupils one by one. This was the first stage of school growth. Classification characterized the second stage of school evolution. The teacher discovered in the class a most helpful device for pupil betterment. The new education then wisely com-

blined individualism and classification. Grading characterized the third stage of school evolution. Teachers discovered the incalculable value of division of labour in school work. Each teacher instructed a grade of pupils in all the subjects. The new education then wisely combined individualism, classification, and grading. Specialization characterizes the fourth stage of school evolution. A teacher devotes himself completely to a single group of school studies, and so he becomes an educational artist. The new education wisely combines individualism, classification, grading, and specialization in the ideal intermediate school work.

THE IDEAL INTERMEDIATE SCHOOL.

1. *The Specialized Intermediate commands itself.* Our old grammar schools with all their defects are accomplishing great things, but they are nowhere satisfactory. We study educational problems in view of future possibilities. What will the intermediate be in a half century? Viewed from this standpoint, we are more apt to see in its true perspective the specialized intermediate school of the future. The spirit of educational progress will certainly compel the early transformation of our grammar schools. The comparative crudeness of their organization and management, and their monstrous waste of pupil and teacher energy, is becoming evident even to the most conservative. The specialized intermediate school, it is believed, will give almost perfect organization and management, will economize energy to the utmost, and will give the highest efficiency. It will embody the world's best educational thought and experience.

2. *The Intermediate Stage of Pupil Growth is Unique.* We think of pupils from their tenth to their fourteenth year as girls and boys. Marvellous physical activity characterizes this stage of growth. The great activity of sense-perception and the burning desire to find out, make of each pupil a keen explorer. The ready memory and the astonishing imitative power make this peculiarly the habit-forming period. The activity of the social emotions leads to the formation of beautiful friendships, mostly between girls and girls and boys and boys. Happy the teacher who wins the hearts of the boys and girls!

3. *The Teacher must understand the Girl and the Boy.* The self is not now a child nor a youth, but a girl, a boy. This is the intermediate stage of development coming between childhood and youth. The school for boys and girls is an *intermediate* school, not a *grammar* school. We study earnestly this stage of growth that we may promote the physical well-being of the intermediate pupils. We study intently this stage of intellectual growth that we may wisely adapt the matter and the methods to the boys and girls, and foster healthy and vigorous mental growth. We study with absorbing interest girls and boys as emotional beings that we may stimulate all ennobling impulses and repress all hurtful feelings. We carefully study this stage of will growth that we may lead our pupils to develop self-control and form desirable habits.

4. *The Intermediate must be adapted to Girls and Boys.* The intermediate is not an advanced primary or a lower high school; it is *sui generis* and unique.

Everything is planned and executed from the stand-point of the intermediate pupil. We live close to the boys and girls and learn to understand them. What is best for our pupils during this trying stage of growth? The school building, the course of study, the programme, the management and the methods of work, are all planned to promote the best interest of the real girls and boys.

5. *Intermediate Specialization characterizes the Ideal Intermediate.* Specialization is the key to efficiency as well as progress. In education as in practical life, the best results are secured by carrying division of labour to its legitimate and helpful limits. The kindergarten and the higher education are splendid object lessons, showing the tremendous advantages of wise specialization. The departmental experiment in our grammar-school work was predoomed because it thought of the grammar school as a lower college. Nevertheless, these crude experiments demonstrated the advantages of specialization and of the division of labour in the intermediate school. Intermediate specialization must be unique, for it must be adapted to boys and girls. It must unitize as well as specialize; must co-ordinate as well as separate; must concentrate as well as correlate.

BUILDINGS AND EQUIPMENTS FOR THE SPECIALIZED INTERMEDIATE.

1. *School Buildings must be planned for School Work.* The transformation of our grammar schools will require a radical change in the construction and equipment of our school buildings. Every school

building should be planned from the standpoint of the school. The school architect literally builds the schoolhouse around the school. When our present school buildings were planned we thought of the grammar school as merely an advanced primary school. The intermediate school of the future will necessitate new intermediate schoolhouses and new equipments. Like all advances, this will work hardships; but the change from the old to the new need not be made hastily. It is a work of time to prepare an army of specialists, and prepare the world for this grand forward movement. Some old buildings may be changed so as to meet the new conditions. As new buildings are needed we can realize in these our ideal intermediate schoolhouses.

2. *The Special School-Building System.* Three well-marked stages in modern school architecture interest educators. The *union school system*, one large study room with small recitation rooms opening out of it, was the crude and cruel pioneer. The pupils of all grades were massed in the study hall, and *governed* by the boss principal. The massing system, though the worst possible, led up to grading. The *grade system*, initiated by Superintendent J. D. Philbrick, of Boston, in 1848, was one of the greatest of all inventions by the way of school buildings. The twelve-room school building was considered ideal; each teacher now governed and taught one grade. This beneficent system soon became general, and is still the basis of our graded school work. But the world's educational progress during half a century makes it clear (1) that each group of schools

must be *sui generis*; (2) that the faculty of each school must be a teaching unit; (3) that ideal school buildings must be built around ideal schools. The *special school-building system* is a growth. The high school was the first group of schools to outgrow the grade system. Everywhere we are now building ideal high-school buildings around ideal high schools. In the fitness of things the grade system will persist in our primary schools, but the ideal primary schoolhouse must be built around the ideal primary school. It is becoming evident that our grammar schools, like our high schools, are outgrowing the grade system, and must soon be transformed to meet the new conditions. We must create our ideal intermediate school, and construct around it an ideal intermediate-school building. We may, as yet, not even venture to suggest plans, but the essentials are becoming clear. The ideal intermediate building must be every way adapted for specialized intermediate work. 1. The conduct room must be constructed and fitted up for conduct teaching. 2. The language-literature room must be fitted up for teaching language and literature. 3. The science room must be fitted up for teaching intermediate science. 4. The mathematics room must be fitted up for teaching intermediate mathematics. 5. The art room must be fitted up for teaching the intermediate-school arts. The special school-building system will embody the best in the world's experience and will give us buildings adapted to the *graded* primary school, to the *specialized* intermediate school, to the *specialized department* high school, and to the *department* college.

INTERMEDIATE FACULTY.

The meaning of the word faculty is enlarged to include any group of special teachers. Each intermediate teacher is a specialist, and all the teachers of an intermediate school, working as a unit, constitute an intermediate faculty.

1. *The Principal is a Conduct Specialist.* For this reason he is made principal. The principal, first of all, is a specialist in school management. To him it is a delight to govern up to self-government and control up to self-control. Corporal punishment and percentage marks and prizes are not thought of; good conduct is secured through ennobling motives. The girls and boys are led through high incentives to conduct themselves properly, to study diligently, and to become womanly and manly. The work of the principal re-enforces the work of the other teachers. He is the unitizing element in the faculty.

2. *Each member of the faculty* is an intermediate specialist in one group of studies. Relieved from the incubus of government and from the distraction of trying to teach the entire course, each intermediate teacher devotes his entire energies to teaching a special group of related subjects. As each teacher has the same pupils for four years, he makes them his friends, studies them one by one, and adapts the matter and the methods to each individual. Teaching becomes a delight, and teachers are transformed from drudges into enthusiastic artists. They grow with the years, become women and men of marked culture, keep fresh and vigorous and sweet, and at sixty are still counted efficient.

3. *The intermediate faculty* is composed of about an equal number of male and female teachers. All positions are open to prepared teachers, regardless of sex. The educational gain is incalculable. It is believed that fitness will give a majority of the intermediate principalships to female teachers, but the dangerous tendency of the old grammar school to practically confine the education of our boys and girls to female teachers, will be obviated.

THE INTERMEDIATE COURSE OF STUDY.

1. *The transformed intermediate school* will necessitate a transformed course of study. It is infinitely important that the matter and the methods should be the best possible, for from the intermediate schools the great body of our pupils go out into life. The old grammar school squanders fully half the energies of teachers and pupils. A wise economy through specialization will enable the new intermediate school to do vastly more work and vastly better work.

2. *Pupil Good is the Ultimatum.* All the work must be work adapted to girls and boys. Either primary or high school work during this period produces arrested growth. The intermediate work must be the best possible to prepare the pupils for complete living. The intermediate work must be the best to prepare the pupils for the high-school work and for life. What work is the best for the pupils? We must begin by sweeping away rubbish—work that hurts and does not help. From the rich realms of knowledge we must select the subjects and the phases of the subjects which experience has shown to be most helpful.

3. *The Intermediate Study Groups outline the Intermediate Work.* The five co-ordinate groups give us in one view the intermediate work in terms of subject-matter. The outline specializes and unitizes the intermediate work and maps out the specific work of each teacher.

Conduct Studies.	{ Conduct lessons, how to study, school discipline. Oral biographical history, American history. Civics, religion, mind lessons.
Language-Literature Studies.	{ Reading, expression. Language lessons, grammar, composition. Juvenile literature, what to read, how to read. Latin or German or French begun.
Mathematics Studies.	{ Arithmetic, introductory algebra. Concrete geometry, oral trigonometry. Oral bookkeeping.
Science Studies.	{ Geography, oral astronomy. Oral biology, oral hygiene. Oral physics.
Art Studies.	{ Physical culture, manual training. Penmanship, drawing, vocal music.

4. *The Programme Course of Study* presents the subjects in their time relations. The grading and classification of our grammar schools are eminently satisfactory. The fifth, sixth, seventh, and eighth grades of our graded schools are the intermediate grades. Each grade embraces two classes, the b's (the beginners) and the a's (the advanced pupils). We designate the classes in a grade by the letters a and b, and the grade by the exponents of these letters. For convenience we here use the small letters. Thus, b^5 and a^5 denote respectively the beginners and the advanced pupils of the fifth grade. The step between classes is half a school year.

The Intermediate Programme Course of Study.

Grades.	Study groups.	Subjects.	Recitation periods.
Grade V, Classes a ⁶ b ⁶ , V year.	Conduct. Language-literature. Science. Mathematics. Art.	Oral general history, how to study, conduct lessons, oral civics. Reading, language lessons, composition, literature. Geography, oral biology, oral physics. Arithmetic, concrete geometry. Physical culture, writing, drawing, music, manual training.	5 10 5 5 10
	Daily lessons, 4 prepared and 3 oral; total weekly		35
Grade VI, Classes a ⁶ b ⁶ , VI year.	Conduct. Language-literature. Science. Mathematics. Art.	Oral general history, how to study, conduct lessons, oral civics. Reading, language lessons, composition, literature. Geography, oral biology, oral physics. Arithmetic, concrete geometry. Physical culture, writing, drawing, music, manual training.	5 10 5 5 10
	Daily lessons, 4 prepared and 3 oral; total weekly		35
Grade VII, Classes a ⁷ b ⁷ , VII year.	Conduct. Language-literature. Science. Mathematics. Art.	Oral general history, American history, conduct lessons, civics, mind lessons. Literature, grammar, composition, Latin begun, or German or French. Geography, oral biology, oral physics. Arithmetic, introductory algebra, concrete geometry. Physical culture, drawing, music, manual training.	5 10 5 5 10
	Daily lessons, 4 prepared and 3 oral; total weekly		35
Grade VIII, Classes a ⁸ b ⁸ , VIII year.	Conduct. Language-literature. Science. Mathematics. Art.	Oral general history, American history, conduct lessons, civics. Literature, grammar, composition, Latin, German or French. Geography, oral biology, oral physics. Arithmetic, introductory algebra, oral geometry, oral trigonometry. Physical culture, drawing, music, manual training.	5 10 5 5 10
	Daily lessons, 4 prepared and 3 oral; total weekly		35

5. *Pupils are promoted by classes* at the middle and at the close of the school year. Individual pupils are promoted whenever the intermediate school faculty consider promotion desirable. As each teacher has each pupil daily for four years, great pliability is secured and the wants of individuals may be met. The teachers in their weekly meetings determine special promotions. Fitness is the consideration. As a rule, bright pupils are given additional work and are advanced with their grades, but no pupil is kept back to his hurt.

GENERAL PROGRAMME FOR SPECIALIZED INTERMEDIATE SCHOOLS.

1. *The General Intermediate Programme schedules the Recitation and Study Periods.* Each teacher works out a specific programme, giving his work in detail.* The faculty agree on the general programme, and the principal approves the special programmes. The recitation periods are uniformly thirty minutes. The programme provides in all ten daily recitation periods; each pupil studies during three periods and recites during seven. All pupils prepare one or two lessons at home, and all are led to read juvenile literature at home at least one hour daily.

2. *For Four Years each Pupil spends One Daily Recitation Period with each Teacher.* This is counted as one of the beneficent features of the specialized intermediate, and will, it is believed, double the educative value of the present grammar-school work. One

* See Part VI.

of the world's foremost educators says: "One of the most dreadful things I can think of is that a pupil should have the same teacher for *four years*; I shudder to think of it. The pupil gets all that is educa-

Suggestive Programme for Specialized Intermediate Schools.

CLOSING TIME	TIME	CONDUCT		LITERATURE LANGUAGE	MATHEMATICS	SCIENCE	ART
		STUDY	RECITE				
9.00	10			OPENING EXERCISES			
9.30	30	b ⁶ , b ⁵ , b ⁷ , b ⁸		a ¹ b ³ c ⁴ d ⁵	a ⁷	a ⁶	a ⁵
10.00	20	a ⁶ , a ⁵ , a ⁷ , a ⁸ , a		b ⁸	b ⁷	b ⁶	b ⁵
RECESS							
10.40	30	b ⁶ , b ⁵ , b ⁷ , b ⁸		a ⁶	a ⁸	a ⁷	a ⁸
11.20	30	a ⁶ , a ⁵ , a ⁷ , a ⁸		b ⁶	b ⁵	b ⁷	b ⁸
RECESS							
11.50	10			a ⁷ b ⁷	a ⁸	b ⁸	a ⁶ , b ⁶ , a, b
12.00	30			a ⁵ b ⁵	a ⁶	b ⁶	a ⁷ , b ⁷ , a ⁸ , b ⁸
12.30	30						a, b, a, b
NOON RECESS—LUNCH							
1.00	30			a ⁷ b ⁷	a ⁶	a ⁶	
1.30	30	a ⁵ b ⁵	a ⁶ b ⁵	a ⁸ b ⁸	b ⁶		
2.00	30	a ⁵ b ⁵	a ⁷ b ⁷	a ⁶ b ⁶	b ⁸		
RECESS							
2.40	30	a ⁶ b ⁶	a ⁸ b ⁸	a ⁷ b ⁷		a ⁸	a ⁵ b ⁵
3.20	30	a ⁸ b ⁸	a ⁶ b ⁶	a ⁵ b ⁵			a ⁷ b ⁷

tive out of a new teacher's personality in less than a year; gets used to her peculiarities, and gets to know her methods of study and discipline. The pupil receives a sort of impress which, if kept up for four years, will endure for life. The result is arrested development. After six months or a year the impression becomes negative to the real growth of the pupil." And we all shudder and quake at the thought

of dooming our children to spend six hours a day for four dreary years under the average overworked grade teacher. But we count the girls and boys fortunate who are privileged, for four precious years, to work a golden half hour daily with each of five earnest, cultured, growing specialists.

3. An unlimited number of excellent programmes are possible. The hourly recess and the alternations of easy and difficult studies will secure good work during each period. ^{4 1/2 - 1}

4. *All Movements occur as signalled by the Programme Clock.* The electric bells regulate all movements, and teacher energy is devoted strictly to educative work. The device for having the programme clock, by means of electric bells, call and dismiss school and call and dismiss all classes, is proving an immense help in school work.

THE SPECIALIZED INTERMEDIATE SCHOOL AT WORK.

1. *The Faculty is an Organic Unit.* Division of work and specialization are carried to their helpful limits, but there is also complete unity. The faculty are an organic teaching unit. All the teachers understand and keep in touch with the work of each teacher; each one supplements and re-enforces the work of all. Each lesson is given in view of all lessons. The pupil is led to assimilate into unity all his acquisitions. The pupil world is a growing organic unit.

2. *Each Member of the Faculty is a Friend of each Pupil.* For four years each teacher, each day, instructs each pupil. Each pupil is thought of as a friend, and the best individual work is combined with

the best class work. Each teacher earnestly works for the good of each pupil.

3. *Interest, Duty: all High Incentives are made Vital.* Such antiquated educational blunders as the rod terror, the marking terror, the examination terror, the nonpromotion terror, and the reporting terror are not thought of. Each teacher is an educator, and bends all his energies to the promotion of pupil good. The pupil gets in love with the work, and gets to delight in manly conduct and in masterly effort.

4. *The Principal is the Centralizing Force.* He is a specialist in conduct culture and in the art of control. He so conducts the opening exercises as to interest the pupils and inspire all good impulses. He so manages the school discipline as to develop habits of law-abiding self-control. He so directs the study work as to teach pupils to find out and master things for themselves. The conduct lessons lead to higher ideals and better habits. The oral lessons in general history impress the best things in the lives of individuals and nations. History and literature are the great conduct studies. Civics is so presented as to help prepare for good citizenship. Easy mind lessons lead to experimental self-knowledge.

5. *The Language-Literature Teacher is a Specialist in Language and Literature.* This group of studies, next to conduct, is the most important study group. The pupils are taught how to read and what to read. The taste for choice literature is cultivated, and each pupil is led to spend one or two hours daily in reading the best juvenile books. The pupils learn

to speak and write correctly and well. The room is fitted up with the best helps for teaching language and literature.

6. *The Science Teacher is a Specialist in the Intermediate Sciences.* She skilfully leads her pupils to find out for themselves. Geography, the science of man's environments, is the leading subject of this group. Biology blends naturally with geography. Practical lessons in physiology and hygiene are made a part of the work in biology. Easy oral lessons in physics and astronomy complete the work in the intermediate science group. The science room is fitted up with the best helps in science teaching.

7. *The Mathematics Teacher is a Specialist in Mathematics.* During four years each pupil devotes one study and one recitation period daily to the mathematics studies. Mental and written arithmetic are so taught as to develop power and become practically helpful. The weekly lesson in concrete geometry is made of great value. Arithmetic almost imperceptibly becomes algebra. Pupils are led to use arithmetic in easy oral bookkeeping. The teacher studies to make the mathematic lessons a unit with the lessons in the other study groups. The mathematics room is fitted up with the best helps for teaching these studies.

8. *The Art Teacher is a Specialist in the Intermediate School Arts.* Physical culture, writing, drawing, vocal music, and manual training make up the art group. In the kindergarten and the primary school the pupils have made considerable progress in these arts. Boys and girls must be given more ad-

vanced work. The art room and the art work emphasize grace and beauty as well as unity. This room is liberally supplied with helps for teaching the intermediate school arts.

9. *The Intermediate Work is thoroughly Correlated and Proportioned.* "Grade teachers unduly press their favourite studies. Will not the danger of inequality be still greater in the specialized intermediate? Will not the strong teachers absorb pupil energies? Will not a "hustler" get the pupils to devote nine tenths of their energies to science?" This is a real danger, but there is safety in the intermediate faculty for both the unspecialized grammar school and the specialized intermediate. Each intermediate specialist is familiar with all the intermediate studies. At the weekly meetings the interrelation of studies is discussed. The psychology of boyhood and girlhood is made a special study. Plans for securing the best work in each group of studies in each of the eight intermediate classes are considered with great care. The vital feature of the new intermediate, how to make the work of all the specialists supplement and re-enforce the work of each, is profoundly considered. At the beginning of each month each specialist prepares an outline of his work for the month, and furnishes a copy to each of his cospecialists. This enables each member of the faculty to work in the light of the work done by each. Though a specialist, each intermediate teacher becomes broad and liberal. All come to see good in the work of each. No one even desires to unduly press his special work. The entire work is proportioned and unitized.

SOME OF THE BENEFITS OF SPECIALIZING THE
INTERMEDIATE WORK.

At what stage of pupil growth should specialization begin? No one even thinks of primary specialization except in art. High-school specialization is now an accomplished fact, and no educator calls in question the astonishing advantages resulting. Many are now asking, "Is it well to specialize the intermediate work?" Naturally, the educational world in our times gives a negative response. The Committee of Fifteen assures us that up to the seventh grade it is better, on the whole, to have each teacher instruct her pupils in all the branches that they study. Col. F. W. Parker insists that concentration is utterly opposed to specialization. These utterances voice the present position of our most progressive educators. Still, the author ventures to plead for the re-examination of the question and for the test of actual trial. Child study has made the kindergarten and the new primary possible and popular. The earnest study of boyhood and girlhood, it is believed, will make the ideal specialized, intermediate, possible, and universal. Let us put the experiment to the test. We can afford to wait a decade or two while the experiment is being tried, and while intermediate specialization is passing through the stages of ridicule and discussion and adoption.

1. *Nothing is lost by Intermediate Specialization.* All that is best in the old is retained in the new. The change comes as a growth; it is the natural evolution of the classified and graded primary school into the classified, graded, and specialized intermediate school.

As progressive educators here and there establish specialized intermediate schools, and as the great advantages of specialization come to be realized, the new school buildings will be planned in view of intermediate specialization, gifted teachers will thoroughly prepare themselves to teach special groups of closely related subjects, and our old graded grammar schools will gradually be transformed into the new specialized intermediate schools.

2. *Even the Financial Gain will be Large.* In the graded grammar school forty pupils to the teacher is the limit of efficiency. In the specialized intermediate, division of work enables the teachers to do vastly better work with sixty pupils to the teacher. Even when the salaries shall be so advanced as to command gifted specialists the financial gain will be considerable.

3. *Specialization will give us Male as well as Female Intermediate Teachers.* The educational gain by having an equal number of male and female teachers in our intermediate work is simply incalculable. At the beginning of the nineteenth century more than ninety per cent of all our teachers were men; at its close, nearly ninety per cent are women. Our kindergarten and primary teachers are women; it is well. But in all schools above the primary about half the teachers should be men; all educators so teach; the specialized intermediate will certainly tend to secure this boon for our intermediate schools.

4. *Specialization looks to Individual Aptitudes.* The special teachers are quick to discover the mental trends of the boys and girls. Gifts are wisely cher-

ished, and each pupil is led to do his best along the lines of his inherited tendencies. Each teacher has the same pupils for four years, and leads them on without a break during this period. Each pupil is treated as an individual and as a friend. The best in the *class* plan and the best in the *individual* plan are combined. The fearful waste occasioned by the annual change from teacher to teacher is avoided. The educational gain is immense.

5. *Specialization will give us Professional Intermediate Teachers.* Division of work easily quadruples the efficiency of the teacher. Relieved of the incubus of discipline and of the killing drudgery of attempting to prepare and teach all the lessons in all the studies, each teacher becomes a master workman in one group of studies. These specialists become professional teachers and hold their positions during efficient work. Intermediate specialization will triple the army of professional teachers, and will give impetus to our educational work.

6. *The Specialized Intermediate will greatly advance Physical Culture.* The art teacher first of all devotes herself to the art of hygienic living. For four years she leads the pupils to root hygienic laws into hygienic habits. In this she has the earnest co-operation of all the other teachers. Physical culture is no longer incidental, but is made a special and leading study. No one now questions the great gain of having a specialist to teach music, drawing, and manual training.

7. *Specialization will do most to promote Moral Education.* The intermediate principal is a specialist

in the art of character growth. His group of studies look to character building. For four years he leads his pupils up to higher ideals and higher realizations. In conduct culture each teacher supplements and reinforces the work of the principal. Here we have the superlative of the new education. Conduct culture ceases to be merely incidental, and takes its place as the leading work of the school.

8. *Specialization will benefit Intermediate Pupils.* It is a safe estimate that a day in a specialized intermediate will help the pupil more than two days in the old grammar school. Skilled specialists stimulate and guide effort, and each room is fitted for the best work in a special group of studies. Pupils become vastly better prepared to go out into life as well as for high-school work. The tendency undoubtedly will be to keep the boys as well as the girls in school until they complete the course; and it is a reasonable estimate that the number who will go up higher will be quadrupled.

The grade grammar school has worked out satisfactorily the problems of organization and promotion. The specialized intermediate school is a higher evolution, and is destined to solve the problems of efficient intermediate-school work. It is believed that all the objections to this advance that have been urged or can be urged will disappear in view of the immense gains.

CHAPTER XXIV.

PUPIL IMPROVEMENT THROUGH SPECIALIZED AND
CORRELATED HIGH SCHOOLS.

SCHOOLS connecting the elementary schools and the colleges are called secondary schools. These schools are known as high schools, academies, seminaries, and preparatory schools. In this country the high school is the public secondary school. Our fathers were content with elementary education, but in our times the masses find the secondary education a necessity. Trained minds are demanded by our civilization in all fields of human activity. The high school is now an essential part of the common-school system.

The High School prepares for Life.—Youth is eminently the seedtime of life. The high school gives the culture, gives the knowledge, and gives the inspiration that make for complete living. Invincible youth learns the art of mastery. The high school prepares the youth reasonably well for the practical life of our times. We do not, it is true, train high-school pupils for special vocations; but we do develop the strongest individuality, honesty, truthfulness, justice, generosity, attentive intelligence, thoughtful habits of industry, and persevering power of application; and this training is the best possible preparation for practical life.

The High School prepares for College.—In all arenas of high endeavour, and in all fields of high achievement, a college education conditions the highest suc-

cess. More and more, in all the walks of life, our youth realize the importance of preparing themselves for college. The high school is the natural link connecting the elementary schools and the colleges. It has heretofore been the missing link in our educational systems. In the future the great body of college students will come up from our high schools; hence our colleges must be adjusted to our high schools. We study to make our elementary schools the best possible for the elementary pupils, and adjust the high school to the elementary school; we study to make the high school the best possible for the high-school pupils, and adjust the college to the high school; we study to make the college the best possible for the college students, and adjust the university professional schools to the college. Thus we create the educational highway leading from the nursery to the university. We build on the rock.

The High School is the Latest to develop.—The centuries first of all gave the world the college and much later the elementary school. The present great forward educational movement is to make the specialized and correlated high school coextensive with the elementary school. The high school is now an accomplished fact in our towns and cities. By placing well-conducted high schools within the easy reach of all our youths we will do most for the elevation of the race. The central schools in our rural districts under wise management will naturally grow into district high schools, and thus a high-school education within the reach of all homes will be made possible and inviting.

The High School is Sui generis. —To conduct high schools as higher grammar schools or lower colleges is a fundamental mistake, leading to arrested development and driving our boys prematurely into active life. The elementary school adjusts the world to the pupil, the high-school pupil adjusts himself to the world, but the college student adjusts the world to himself. We use all devices to help the feeble beginners to grasp the elements of knowledge; we lead the vigorous youth on to mastery; we inspire the strong college student to achieve. The high school is for youth. In its facilities, its organization, its work and its methods it must be adapted to youth. The specialized and correlated high school is unique.

Youth is a Marvellous Stage of Development. —The high-school teacher studies with boundless interest this period of human growth. About the fourteenth year there comes the stupendous change from boyhood and girlhood to youth. There is almost a leap in both the physical and mental life. The emotions become tempestuous, and the youth seems impelled by mighty subjective energies. Lofty aspirations and irrepressible yearnings for noble things begin to sway the young life. Egoism gives place to altruism. Duty impulses become imperative and the religious emotions are awakened. Will asserts its sovereignty, and a youth must do or die. The imitative activity of the boy becomes the creative activity of the youth. Action is salvation; inaction means physical, mental, and moral death. From the fourteenth to the eighteenth year is peculiarly the formative period in human life. During these seething, restless, melancholy

years the trend is given that leads to eminence. We study to create high schools adapted to youth—schools that will utilize the broad sympathies, the generous impulses, the high aspirations, and the boundless energies of youth.

The Evolution of the High School is a Story that interests all the World.—The high school having passed through the stages of individualism, classification, and grading, has now reached the stage of specialization. Tutorism, college preparatories, academies, seminaries, were some of the diversified forms of individualism and classification. Grading was hailed as a panacea; the ninth, tenth, eleventh, and twelfth grades of our city schools became the high school. Each grade had its teacher, and the high school was merely a higher grammar school. Arrested development was the inevitable result. Some belated high schools are still at this stage of evolution. Happily, some educational Edison of our own times suggested high-school specialization. The best in individualism and classification and grading are carried up into specialization. Our ideal high-school teacher is a college graduate, a trained professional educator, and a specialist in a group of high-school studies. Our ideal high-school faculty is a teaching unit. Our ideal high school is specialized and correlated. Partial departmental teaching will come as a growth.

ORGANIZATION OF THE HIGH SCHOOL.

1. *The High-School Building is Unique.* We create our ideal high school and construct our ideal high-school building around it. Each special teacher has a room fitted up for his special work. The work-

ing library and the necessary apparatus are essentials. Assistant teachers have their classrooms fitted up for special work. Since laboratory methods must more and more dominate in high-school work, it is important that our high-school buildings should be planned and equipped with this in view.

2. *High-School Organization is Unique.* Grades evolve into groups capable of working together. The specialized intermediate work grows into the specialized high-school work, and the specialized high-school work grows into the specialized college work. But the high-school work is unique and requires a unique organism. It is a ruinous mistake to think of the high school as a lower college or a higher intermediate. We study youth and create schools adapted to this stage of education.

3. *The High School considers Years.* The grouping is easy. Pupils who are doing the first, second, third, and fourth years' work are grouped as D's, C's, B's, and A's. The sections of these groups are designated as D¹, D², D³; C¹, C², C³, etc. This is all. However small or however large the high school may be, this simple scheme answers every purpose. Grades are for the elementary schools, and all such epithets as freshman, sophomore, junior, and senior are left to the college. The high-school pupil is doing the first year's work, and is a D; or the second year's work, and is a C; or the third year's work, and is a B; or the fourth year's work, and is an A.

4. *The Larger High Schools have Two Graduating Classes annually.* The pupils that become A's at the first of the year graduate at the middle of the year,

but pupils that become A's at the middle of the year graduate at the middle of the succeeding year. Our smaller high schools can have but one graduating class annually, and so must give the pupils who complete the intermediate work at the middle of the year a half-year's vacation before admitting them.

5. *High-School Pupils advance with their Classes.* When his work is satisfactory a pupil is promoted with his class. Individuals found well prepared for advanced work are promoted at once by the faculty. As a rule, it is best to give bright pupils collateral work and so have them advance with their classes. Here and everywhere preparedness to work with the next group is the condition of promotion.

6. *High-School Work is prescribed.* The college student under guidance elects his studies, but the high-school pupil pursues the prescribed studies. This limitation is wise, for immature youths are not prepared to elect judiciously, nor can our smaller high schools afford to sustain elective courses. Our larger high schools offer four courses, but the studies are substantially the same in all the groups except in that of language and literature. Our smaller high schools can sustain but one course. The faculty, however, adapts the work to the pupils.

HIGH-SCHOOL STUDY GROUPS.

1. *The High School prepares for Life.* Preparation for complete living is the ultimate educational end. The immediate purposes in school work are development of power and acquisition of knowledge. The aims of the high schools are to prepare for life

and also prepare for college. Studies best calculated to develop power and prepare for life should also best prepare for college. Most of our high-school pupils do not go higher, but pass from the high school directly into active life. Clearly the work must be made the best possible for the many, and at the same time best fit the few for college.

2. *Correlation of High-School Studies is Fundamental.* Grouping the subjects taught is an incalculable gain, but it is still more important to further co-ordinate the entire work so far as this can be done naturally and logically. Unrelated knowledge hurts and does not help. The legitimate correlation of subjects is fundamental. The natural and practical grouping of school studies and the wise concentration of school work are leading problems of our times. The prolonged study of a few subjects is every way better than the brief study of many subjects. This educational axiom limits selections from each group to the best things. Good teaching enriches and broadens the course.

High-School Study Groups.	Conduct	School discipline, investigation, research.
	Group of Studies.	General and special history, civics, Practical ethics, elementary psychology.
	Language-literature	Written and oral expression, English language and literature, Foreign languages and literatures.
	Group of Studies.	
	Mathematics	Arithmetic, algebra, Geometry, plain trigonometry, Bookkeeping.
	Group of Studies.	
Science	Science	Physical geography, oral astronomy, Elementary biology, elementary physiology.
	Group of Studies.	Elementary physics, oral chemistry.
Art	Art	Physical culture, manual training.
	Group of Studies.	Drawing, vocal music.

3. *The Group Order is thought to be Reasonable.* Educative value is made the test. What group of studies has the highest educative value?

Educative Value. { 1. Culture value.
2. Practical value.

The above group order, it is thought, will bear all reasonable tests. We think of the educative work in each group of studies. We may consider growth from the physical standpoint, and make development of brain areas the test. Each study awakens, strengthens, develops special brain areas. The study group that exercises the highest and the widest brain areas ranks highest. The above group order, it is thought, conforms to the brain-area test. School work is made the test. The above group order is eminently practical, and seems to be the best for school purposes. Fellow-teacher, please read carefully once more, as supplementing this paragraph, Correlation of Studies by the Fifteen, and Secondary School Studies by the Ten.

THE HIGH-SCHOOL COURSE OF STUDY.

1. *The Study Groups are here expressed in Years.* The work in each group for each of the four high-school years is outlined. The larger high schools, with six or more teachers, can sustain more than one prescribed course. But, except in foreign languages, our well-organized high schools, small as well as large, do substantially the same work.

2. *Each of the Five Study Groups is counted of Great Educative Value.* The language-literature group, however, is given double the recitation time of the other periods. English is considered the natu-

ral equivalent of conduct, of mathematics, of science, of art, and the work in foreign languages and literature may be made equal to the work in English.

Course of Study for the Smaller High Schools.

Years.	Study groups.	Subjects.	Periods.
I year, Classes D ¹ , D ²	Conduct. Language-literature. Science. Mathematics. Art.	Practical ethics, general history, civics. Literature, grammar, rhetoric, expression. Latin or German or French. Physical geography, biology. Arithmetic, algebra, concrete geometry. Physical culture, vocal music, drawing, manual training.	5 5 5 5 5 5
II year, Classes C ¹ , C ² .	Conduct. Language-literature. Science. Mathematics. Art.	Practical ethics, general history, civics. Literature, grammar, rhetoric, expression. Latin or German or French. Biology, physics, physiology. Algebra, geometry, bookkeeping. Physical culture, vocal music, drawing, manual training.	5 5 5 5 5 5
III year, Classes B ¹ , B ² .	Conduct. Language-literature. Science. Mathematics. Art.	Elementary psychology, English history, civics. Literature, composition, expression. Latin or German or French. Biology, physics, physiology. Geometry, bookkeeping. Physical culture, vocal music, drawing, manual training.	5 5 5 5 5 5
IV year, Classes A ¹ , A ² .	Conduct Language-literature. Science. Mathematics. Art.	Elementary psychology, American history, civics. Literature, composition, expression. Latin or German or French. Physics, chemistry, biology, physiology, oral astronomy. Trigonometry, geometry. Physical culture, vocal music, drawing, manual training.	5 5 5 5 5 5

3. *Each Special Teacher Outlines his Work.* In the general high-school course for the smaller high schools details are omitted. It is left to each high-school faculty to complete the outline. The require-

ments are well defined. The plan of each specialist is discussed and approved by the faculty. No study group must dominate; there must be proportion and correlation. No study in a group must be made to exclude the other studies.

4. *Partial Departmental Teaching.* In the larger high schools each group teacher becomes the head of a department, and with his assistants constitutes a faculty group or a department. In the future the legitimate department teaching will greatly improve the high-school work.

SUGGESTIVE PROGRAMMES FOR THE SMALLER HIGH SCHOOLS.

1. *The Conditions determine the Real Programme.* The number of teachers in our smaller high schools varies from two to six, and the number of pupils from thirty to two hundred and forty. Schools with more than six teachers and more than two hundred and forty pupils take rank as our larger high schools. Each high school adapts its course of study and its programme to its conditions. The group teachers are the same in all, but in the larger schools each group teacher has one or more assistants. The ideal programme for the smaller high schools is submitted as suggestive. The building, the number and advancement of the pupils, and the number of teachers, must determine the actual programme of the school. The ideal programme is for an established high school having a suitable building, having about two hundred pupils, and having five teachers. The language-literature teacher will need an assistant.

2. *The Ideal Programme must be counted as Suggestive.* It is a work of art to create a good school programme. Each high-school faculty must necessarily construct its own programme. The number of possible good programmes for a specialized high school with five or more teachers is practically unlimited. Each pupil has six daily recitations. The work is so planned that a pupil will recite daily three prepared lessons and have two or three drill recitations.

3. *Each Teacher conducts Seven Recitations daily.* As each teacher has eight classes, and as we have but seven recitation periods, each teacher must have one combined recitation, or must manage to have a pupil assistant teach one of his classes.

4. *The Recess of Ten Minutes between Classes is of Great Value.* The utmost freedom consistent with good conduct is desirable during the recesses. Complete relaxation is encouraged, but each youth studies propriety. Each teacher is given one hour a day to visit the intermediate classes. Thus the high school is kept in close touch with the intermediate work.

5. *Special Programmes are Essential.* Each teacher has the pupils in his group of studies for four years; he makes his special programme to suit his work. These special programmes are submitted to the faculty for approval, but each teacher is given almost unlimited freedom. A high school is an educational unit, and each teacher plans his work in view of all the work.

6. *High Schools with Three or Four Teachers make Programmes to suit Conditions.* In these schools each teacher is a specialist in one group and is charged with

work in other groups. The work and the recitation periods are the same, but the pupils are arranged in four instead of eight groups, and the step between the classes is a year instead of half a year. The class promotions occur at the close and not at the middle of the year. The programme is made accordingly.

Suggestive Programme for a Specialized High School.

PERIODS		CONDUCT		ENGLISH	LANGUAGE	MATHEMATICS	SCIENCE	ART
CLOS- TIME	STUDY	RECITE						
9.40	40	D ¹ D ²		A ¹	B ¹	A ²	B ²	C ¹ C ²
RECESS								
10.30	40	B ²	A ¹ A ²	C ¹	C ²	D ¹	D ²	D ¹
RECESS								
11.20	40	A ¹ A ² C ²		B ¹ B ²	C ¹	D ²	D ¹	
RECESS								
12.10	40	D ²	B ¹ B ²	A ²	D ¹	C ²	C ¹	A ¹
NOON RECESS								
1.20	40	B ¹ B ²		D ²	A ¹ A ²	C ²	C ¹	D ¹
1.30	10				RECESS			
2.10	40	D ¹ A ²	C ¹ C ²		B ²	A ¹	B ¹	D ²
RECESS								
3.00	40	A ¹ C ¹ C ²		D ¹	D ²	B ¹ B ²		A ²
RECESS								
3.50	40	B ¹ C ¹	D ¹ D ²	C ²			A ¹ A ²	B ²

Explanations.—1. The school has five special teachers and an assistant in literature. Each teacher conducts seven recitations, thus meeting all the pupils daily. Each pupil has six recitations daily, three or four prepared lessons and two or three drill lessons. 2. Forty-minute recitation periods are found most

satisfactory in high-school work. The recess of ten minutes between recitations is simply invaluable. 3. All movements of the school are regulated by electric bells. The electric clock literally calls and dismisses all classes. 4. On Saturdays each class spends two hours in laboratory or manual-training work.

THE HIGH-SCHOOL FACULTY.

1. *The High-School Faculty is an Educative Unit.* Correlation is vital. The work of each teacher is supplemented and re-enforced by the work of all the other teachers. At the beginning of each month each teacher hands his coworkers an outline of his proposed work for the month. These outlines are examined at the faculty meetings; they enable each teacher to co-ordinate his work with the work of the other teachers. Unity is secured.

2. *The Five Specialists direct the Work.* Each teacher is a college graduate and a graduate of a school of pedagogy. Each has made special preparations to teach a special group of studies. Each is elected because of his fitness for special work. Each studies his own work in view of all the work. Each is a student of pupil nature, and studies to adapt his work to his growing pupils. Unity, harmony, and skill are secured.

3. *The High-School Principal Unitizes the Faculty and the Work.* He is always a professional educator and a specialist in the conduct studies. He gives his best energies to training his pupils to habits of self-control, self-reliance, and efficient work. During the

first and second years he uses practical ethics as the basis of his conduct lessons, and during the third and fourth years these lessons are given in connection with elementary psychology. The pupil is led to study the individual self and the larger social self. History and civics are so studied as to re-enforce the conduct lessons and lead up to a life of duty. These are made pre-eminently conduct studies. The principal plans to co-ordinate the work of all the teachers. In a town of ten thousand inhabitants or less the high-school principal is supervising principal of all the schools. The ideal programme gives him four periods daily for teaching and three for supervision. Through the primary and intermediate principals he directs the work of the primary and intermediate schools, and through the visits of his special teachers he constantly reaches all the grades. He is, indeed, the principal teacher.

4. *The High-School Faculty Meetings are of Vital Interest.* Each teacher studies the work of all the teachers and becomes broad and liberal. The faculty discussions and studies are the antidote to the narrowness of the mere specialist. Advanced pedagogical studies receive large attention. The high-school teacher is a growing educator.

5. *The High-School Work demands Men as well as Women.* The sexes should be equally represented in the high-school faculty. The predominance of either sex in high-school faculties is considered a fundamental educational blunder. The teachers must be men as well as women who know life and who can deeply interest the pupils in the living present.

"High-school education, if the unjust charge were true, that it kept youth away from the interests of life and made him insensible to its pulsations because it locks him up in the world of the past and of scholastic and unreal abstraction, would indeed tend to unfit for life and be a failure. The opposite course is the one which the high school should pursue with the graduate of the elementary school. It should aim at bringing him into the closest touch with the highest interests of current life, and to fill him with a strong desire for activity in the world of reality.

"During the years that a pupil is in the high school the saying of Terence should apply to him, 'He is a man, and nothing that relates to man should be without interest to him.'"—*Superintendent F. Louis Soldan.*

CHAPTER XXV.

STUDENT IMPROVEMENT THROUGH COLLEGE IMPROVEMENT.

The Modern College makes Close Connection with the High School.—Most college students in the near future will be high-school graduates, and there must be no break in the educational highway. The educational world is giving its best efforts to the improvement of elementary and secondary schools so as to best prepare youths for life and for college.

It is believed that early in the twentieth century the high-school diploma will condition admission to the college, as the elementary-school certificate will condition admission to the high school. This plan exalts the elementary and the high schools and greatly helps the college. It necessitates the maintenance everywhere of specialized and correlated high schools.

It eliminates the incubus and the burlesque of college admission examinations. It unitizes the school and the college work.

The Modern College adapts the Instruction to the Students.—The professors are well grounded in practical psychology and in the science and art of teaching. They realize that knowledge can not be transferred; that knowledge can be taught only by occasioning the appropriate activities in the learner's mind. They profoundly study the new students. They wisely classify the freshmen, and adapt the work to each student. The antiquated college clings to the old dogma of formal discipline, ignores the doctrine of apperception and interest, and labours to make each student fit its iron bedstead. It hurts as many as it helps, and freezes and crushes out half its students by the end of the second year. The modern college is doing a beneficent work in the sensible management of its students during the first and second college years.

The Modern College Professor is a Teacher. - His professional preparation for teaching has been as thorough as that of the physician for the practice of medicine. He leads his students in research and investigation. He inspires and guides, as well as instructs. He works with the students, and is their friend and adviser. The antiquated college professor lectures but does not teach. He does not know his students. The close friendship between the modern college professor and his students is revolutionary; it doubles the value of the college course.

The Modern College Faculty is a Teaching Unit.—The professors are broad and liberal. Each is in a de-

gree familiar with work done by the other members of the faculty, and so works in view of all the work. There is proportion and harmony and correlation and concentration. In our belated archaic colleges the professors are as isolated in their work as they could be if working in different planets. A distinguished professor in one of these colleges says: "I have taught in this college for a third of a century; during all these years not one of my fellow-professors has spent an hour in my class room." The transformation of these antiquated colleges into modern colleges with real faculties of earnest coworkers is certainly one of the most beneficent of all college reforms.

The Modern College believes in Coeducation.—In the college work no distinction is made on account of sex. A due proportion of the professors are women. The students are women and men. The hazing, the rushing, and the dissipation of the old-time male colleges is unknown. In college, as in good society, young men and young women prove mutually helpful, and the young women become more womanly and the young men become more manly. By the close of the century most male colleges will have opened wide their doors to women; a decade or two later most female colleges will have opened their doors to men.

The Modern College deeply interests the Educator.—A marvellous transformation is taking place. Development through scholarship takes the place of formal discipline. Laboratory work, original research, investigation, and the best teaching largely take the place of the stupid lecture and the comical quiz. The occasional lecture is rich in thought and in suggestive-

ness. The ideal professor studies his students as well as his specialty. His class work is helpful, but he does most in guiding and inspiring the individual students. Like Aristotle and Kant, he is a teacher as well as a student. Like Arnold and Agassiz, large hearted and broad viewed, he is an educator as well as a peerless specialist.

The Modern College strengthens the High School.—

The high-school graduate without a break enters upon the college work. The great movement of our times is to secure the educative unity of our schools and our colleges. The modern college demands of its students culture and mental power rather than a prescribed amount of knowledge. Four years of good high-school work leads to the college. The high-school specialists are college graduates, and are thoroughly acquainted with the needs of the college as well as the needs of the high school. The high-school faculty and the college faculty are coworkers. These faculties study to do most for the pupil and the student.

Options and Department Work characterize the Modern College. —Students, under skilful guidance, select their studies. A *course* occupies three weekly recitation periods through the school year. The aim is to make all courses of great educative value. Educational symmetry requires that each of the five co-ordinate groups of studies should be represented in the work of the student through the college years. It is a serious blunder to overlook this requirement; students must select their studies under advisement. Modern college faculties work in groups called schools and departments. The isolated professor is a thing of the

past. Department teaching, the highest stage of school evolution, is the crowning feature of modern college work. Specialization is correlated, and a group of professors become a teaching unit.

The Smaller Modern Colleges are Invaluable.—They can give fewer options, but they can do as good work as the university. They have some marked advantages. Students are individuals rather than masses. The instruction is given by the professor and not by assistants. They create centres of educational life of inestimable value. They have vast advantages in the development of character. Everywhere the well-endowed and efficient smaller college should be fostered.

THE MODERN UNIVERSITY.

All teachers feel a deep interest in the modern university. It is getting into close touch with the schools and with the people through adaptation and university extension. Graduate work characterizes the university. Its departments of education, of medicine, of law, of engineering, etc., are its glory. We study with profound interest the revolutionary movements now going on in our great universities.

1. *The Undergraduates have Skilled Advisers.* Students are carefully grouped in small sections, and each group has one of the professors as adviser. Our largest universities may thus keep in close touch with each undergraduate. At no time in life do young people more need a wise friend than during the freshman and sophomore years in the great universities. During these precious years in the antiquated colleges

and universities a large per cent of the students waste their energies and drift to the bad.

2. *Physical Culture includes all Students.* The best gymnasiums are provided, and skilled specialists direct the exercises and lead the students in the ways of physical vigour. Football and other semibarbarous games are left to the experts. The modern university plans the physical betterment of all students, and not merely the pampering of a team or crew.

3. *The Course System makes Adaptation possible.* Under the guidance of his adviser each student elects the course best for him. Graduation is conditioned by culture, and the B. A. and the M. A. degrees are conferred on students who satisfactorily complete any of the co-ordinate degree courses. The gain over the antiquated curriculum and the confusing multiplicity of degrees is marvellous.

4. *Early Specialization Helps.* During the junior and senior years a student may take one course each year in his chosen specialty, and these courses count for his academic as well as for his professional degree. The gain is incalculable. The stimulus is such as to augment general culture. Then the student learns to enrich his specialty by all learning. Take the department of education; the student elects teaching. During the junior and senior years he takes two professional courses. He learns to study and observe and read as an educational artist. Two years of graduate work in the department of education prepares him for the profession of teaching. The same is true of the department of law, the department of medicine, and the other professional departments.

CO-ORDINATION AND CORRELATION OF EDUCATIONAL INSTITUTIONS.

As a fitting summary, a few paragraphs from an article in the Popular Science Monthly by Dr. E. H. Magill will interest all teachers :

"The common consensus of thoughtful minds in these latter days has been gradually tending more and more toward the proper co-ordination and correlation of our educational institutions. In a comparatively new country like ours it may naturally be supposed that, as the need for various grades of these institutions has arisen, the want has not always been supplied with a sufficiently careful consideration of the needs of those of other grades, and that, as a result, the general educational interests of the country require some readjustment and reorganization. It should be observed in the beginning that no censure is intended to be applied to any institution or class of institutions for their present status, as this has resulted from the progressive stages of their growth and development, and no sudden or violent change is contemplated or desired. The general outline here to be presented is rather an ideal system for future realization, toward which all may gradually work as their surroundings and circumstances may permit.

"In the three years from the age of three to six, with competent trained teachers, the little ones receive a training of the hand, the eye, the ear, the voice, and the mind that tells powerfully upon all the subsequent years of their school and college life; and the social, moral, and unsectarian religious element of their na-

tures receives in these early years a most profound and lasting impression.

" We present this co-ordination and correlation of our educational institutions as an ideal scheme toward which we should ever aspire, but which we can not expect to see realized by any sudden or violent changes, or, indeed, in full operation within the next quarter of a century. But that something analogous to that which is here presented will be found feasible and practicable, and to harmonize fully with the intuitions of this free country of ours, and enable us to attract students from abroad in great numbers instead of sending them, as now, to complete their education in Germany, France, or England, we are most thoroughly convinced.

BETTER SCHOOL AND COLLEGE ORGANIZATION AND CONTROL.

SUGGESTIONS, STUDY HINTS, AND TOPICS FOR DISCUSSION.

XX. Correlation of Schools and Courses.—What do you consider the central idea in education as a science? Show the organic unity of wisely planned school work. Why should all teachers learn to view life as a whole? Describe the stages of pupil growth and the corresponding schools. What studies have the highest educative values? Name the five *necessary* co-ordinate groups of studies. Discuss the inorganic and the organic groups: the literature group; the language group; the history group. Name the five *practical* co-ordinate study groups. Do school conditions demand this grouping? Discuss the conduct group; the language-literature group; the science group; the mathematics group; the art group. Give some of the grounds for this grouping. Give the history of the Report of the Fifteen. Describe the course of study for elementary schools planned by the committee. Explain the elementary-school period; the recitation periods; recitation time;

promotions; few subjects; correlation of studies. Give the history of the Report of the Ten. Describe the parallel courses of study for secondary schools planned by the committee. Discuss the place and work of the college. Give the group place of each of the school studies (page 200), and describe its kindergarten phase; its primary phase; its intermediate phase; its high-school phase; its college phase. What do you mean by the correlation of schools and colleges? by the correlation of courses of study? by co-ordination? by concentration?

XXI. Efficient Rural Schools.—Why is it so necessary to improve rural schools? Sketch the history of our country schools. What schools are classed as rural schools? Why must the rural school work be *sui generis*? Describe your ideal country school; country schoolhouse. Why do you consider the organic grouping of the rural schools an educational necessity? Is the township grouping the best? Why should a school group be compact? Why should the school board be perpetual? Why is it vital to make the teacher of the central school principal? Give some reasons for making village schools the central schools. Why should rural-school organization be exceedingly flexible? State your plan for creating and managing rural-school libraries. What school apparatus is necessary in country schools? Give some of the advantages of rural schools; some of the disadvantages. Describe your plan for classifying rural schools. Give some of the advantages of the four-group plan. Discuss the rural-school study groups; the rural-school course of study; the rural-school programme. Compare the three-group and the four-group programmes. May the teachers of a rural district be organized into a faculty? Describe the faculty meetings. Describe the partially graded rural school; the rural high school. Explain the rural-school methods. Is it possible to make our rural schools as efficient as the urban schools?

XXII. Kindergarten and Primary Schools.—What is the key to child knowledge? Describe the kindergarten period; the kindergarten spirit; kindergarten literature. Why must the first primary grade be semi-kindergarten? Picture your ideal primary schoolhouse. Describe the primary faculty. Outline primary grading and classification. Give the primary study groups. Give some features of the grouped course of study for primary schools. Why must details be left to primary faculties?

XXIII. Specialized Intermediate Schools.—Describe the educational highway. Discuss stages of pupil growth; the uniqueness of each school group; stages of school evolution. Examine intermediate specialization: the intermediate stage of pupil growth; the adaptation of intermediate work. Describe the ideal intermediate-school building. Discuss the intermediate faculty. Why should there be as many male as female teachers? Discuss the intermediate study groups; the intermediate course of study; the suggestive intermediate programme; individual promotion; class promotion. Why *must* details be left to each intermediate faculty? Picture the specialized intermediate school at work. Describe the work of each special teacher. Give a few of the reasons urged for transforming the old grammar school into the specialized intermediate school. State some of the objections. Why should we hasten leisurely?

XXIV. Specialized and Correlated High Schools.—What schools compose this group? Why should the high school prepare for life as well as for college? State the order in which the school groups appeared. Discuss the question, Is the high school *sui generis*? Describe youth. Discuss the question, Is youth the real formative stage of growth? Tell the story of high-school evolution. Describe your ideal high-school building; high-school equipments; high-school organization; high-school promotion and graduation. What are the aims of the high school? What studies are best? Examine the high-school study groups. Discuss the questions, Should conduct studies be made a distinct study group? Should language and literature be grouped as the language-literature group of studies? Has science a higher educational value than mathematics? Should the language-literature group of studies be given double the time of the other groups? Examine the course of study for the smaller high schools. Why must each specialist arrange the details of his work? Explain the suggestive programme. Describe the high-school faculty. Why should the principal be the leading teacher? Why should he teach the conduct studies? Why should he be ever a leader and never a boss? Discuss the question, Should the sexes be equal in the high-school faculty?

XXV. College Correlation and Improvement.—Point out the distinction between a high school and a college; between a college and a university. Describe the correlation of high-school and

college work. Compare the modern and the antiquated college in the treatment of the freshman class; in artistic teaching; in co-education; in progress; in giving options; in strengthening the high school. Discuss, Should the smaller colleges be fostered? Why are all men interested in the modern university? Compare the modern and the antiquated university as to student advisers; as to physical culture; as to courses. Discuss, Should specialization begin with the junior year? Illustrate by the department of education. Give a brief statement of Dr. Magill's scheme of co-ordination and correlation.

PART VI.

PUPIL IMPROVEMENT THROUGH EFFICIENT METHODS OF TEACHING.

CHAPTER XXVI.—EFFICIENT METHODS IN CONDUCT TEACHING.

XXVII.—EFFICIENT METHODS IN LANGUAGE-LITERA-
TURE TEACHING.

XXVIII.—EFFICIENT METHODS IN SCIENCE TEACHING.

XXIX.—EFFICIENT METHODS IN MATHEMATICS
TEACHING.

XXX.—EFFICIENT METHODS IN ART TEACHING.

XVI and XVIII. CLASS METHODS.	{ 1. Characteristics of efficient class methods. 2. Investigation class method. 3. Helpful class devices. 4. Oral teaching and book teaching.
XXVI. CONDUCT METHODS.	{ 1. Pre-eminent importance of conduct teaching. 2. The conduct group of studies. 3. Efficient methods in <i>special</i> conduct lessons. 4. Efficient methods in history. 5. Efficient methods in mind lessons and practical religion.
XXVII. LANGUAGE-LITERATURE METHODS.	{ 1. Language-literature group of studies.—Educative value. 2. Efficient methods in reading and expression. 3. Efficient methods in literature. 4. Efficient methods in language. 5. Efficient methods in composition.
XXVIII. SCIENCE METHODS.	{ 1. Science group of studies.—Educative value. 2. Efficient methods in geography. 3. Efficient methods in biology. 4. Efficient methods in physics.
XXIX. SCIENCE METHODS.	{ 1. Mathematics group of studies.—Educative value. 2. Efficient methods in arithmetic. 3. Efficient methods in concrete geometry. 4. Efficient methods in oral bookkeeping.
XXX. ART METHODS.	{ 1. Art group of studies.—Educative value. 2. Efficient methods in physical culture. 3. Efficient methods in drawing and writing. 4. Efficient methods in vocal music. 5. Efficient methods in manual training.

PART SIXTH.

PUPIL IMPROVEMENT THROUGH EFFICIENT METHODS OF TEACHING.

CHAPTER XXVI.

EFFICIENT METHODS IN CONDUCT TEACHING.

CONDUCT is the greatest thing in education. The ideal education elevates conduct culture from a fitful incidental training to the highest place in school and college work. All studies are, in a sense, conduct studies, as all studies are language studies ; but in history, rather than in algebra, high ideals and ennobling motives are impressed. The studies which lead to self-knowledge and to rational doing are pre-eminently conduct studies. All true teachers are, first of all, conduct teachers.

The Conduct Group of Studies.

Elementary Schools.	Secondary schools.	Colleges.
Special conduct lessons.	Practical ethics.	Philosophic ethics.
Biographical history.	Comparative history.	Philosophic history.
Oral civics.	Elementary civics.	Philosophic civics.
Oral mind lessons.	Elementary psychology.	Philosophy.
Practical religion.	Practical religion.	Practical religion.

duct teachers, as all are language teachers ; but the teacher of the conduct studies becomes a specialist in conduct culture. Promoting good conduct is made primary.

It seems fitting to include in the conduct study group, studies of the individual self, the social self, and the cosmic self. Self-knowledge and rational self-activity characterize the conduct group of studies. Intelligent doing develops character. Educative methods in teaching the conduct studies are such as foster character growth. Education is the development and training that fit pupils for the highest happiness of which they are capable, and happiness comes from loving law-abiding. The conduct studies have the highest educative value, for they do most to prepare pupils for complete living. We marvel at the strange neglect of conduct culture in the past, and greatly rejoice in the movement to exalt conduct teaching. In school and college, one recitation period daily must be devoted to the conduct studies. A special programme for conduct work will be planned by each conduct teacher. All principals of schools and presidents of colleges are to be specialists in conduct culture. Teachers in our primary and ungraded schools, and in our unspecialized grammar schools, are conduct teachers first of all ; they are also language-literature teachers, and science teachers, and mathematics teachers, and art teachers.

METHODS IN TEACHING SPECIAL CONDUCT LESSONS.

The special conduct lessons in the elementary school become practical ethics in the high school and

philosophic ethics in the college. Good conduct teaching fosters the growth into character of right ethical ideas, ennobling emotions, and generous acts.

1. *School Conduct.* Educative school government is the best means of practical conduct culture. Law-abiding self-control becomes habitual. Pupils learn to work silently and orderly. Regularity and promptitude are school virtues. Gentility and generosity become ingrained. All right habits are cherished. Pupils learn to correct their own faults. Even punishments are made helpful. The teacher thinks of school government as the means of promoting character growth. Part III, *Educative School Government*, may be studied as a part of this section.

2. *How to Study.* Good school conduct means studious habits and efficient study. Teaching pupils how to study, developing a love of study, and training to studious habits are cardinal in school work. Study is the pupil's business. Self-control becomes self-concentration, and conduct becomes studiousness. To learn how to learn is more important than the knowledge gained. The teacher leads even the little ones to find out for themselves. Pupils are trained to find out from Nature and also to find out from books. It is a great thing to teach pupils what to study and how to study. Studious habits are even more important than learning. As pupils advance they learn to investigate, learn to make independent research.

Half the energies of our pupils are squandered because we do not teach them how to study. Many of our pupils will fail in life because we fail to edu-

cate them to succeed. All things are possible to pupils who acquire studious habits and learn how to do efficient work. Good teaching trains pupils to do good studying. Occasionally the teacher and the pupils devote the recitation period to studying the new lesson ; but we secure the most satisfactory results when we devote one weekly recitation period to helpful lessons in the art of efficient study. These lessons should be continued till the pupil reaches the seventh grade. These lessons are of great value to teachers as well as pupils. Some wise teacher should prepare a practical manual on Teaching Pupils how to Study.

3. Lessons in Morals and Manners. These are special conduct lessons. Pupils think of these as conduct lessons rather than lessons in manners and morals. When wisely given, these lessons are intensely interesting and of the highest practical value.

How often is Best?—One lesson each week during the first six elementary school years has proved most profitable. All school work supplements these special lessons, but experience demonstrates the necessity for these specific and systematic lessons. The Committee of Fifteen mentions that “brief series of lessons in morals and manners should be given each year with a view to build up in the mind a theory of the conventionalities of polite and pure-minded society.”

What Lessons are most Beneficial?—Such lessons as tend to foster high ideals and good conduct. Incidents in the lives of great women and men are always helpful. Historic events involving morals and man-

ners are always interesting and uplifting. Here, as everywhere, concentration gives the best results. Patiently and persistently the teacher leads the pupil to grow the cardinal virtues into habits. All lessons are selected and taught to promote this end.

What Methods are most Efficient?—Oral teaching is every way the best. Oral lessons should never become lectures, but more like Socratic dialogues, building up systematic knowledge partly from what is already known and partly by new investigation. Pupils must be led to give incidents from their own experiences and to express their own views. To-day the topic written on the board is, The Generous Pupil. The teacher introduces the lesson by telling a striking illustrative story. Pupils tell of generous acts which they have witnessed. Why do you like generous pupils? Pupils give reasons. Why will you try to be generous from habit? Pupils are led to resolve and tell. Lessons thus taught get into the lives of the pupils.

How may Conduct Lessons be adapted?—We study to adapt the conduct lessons to the stage of growth and to the social environments. We study our pupils as they live at their homes and connect our lessons with their experiences. Reasoning and sermonizing are worse than wasted on the little child. Through kindness and environments we lead the little ones to form good habits. Through firmness and gentle but unvarying restraints we develop a proper respect for authority and prevent the formation of bad habits. During early childhood conduct lessons are largely training lessons.

How may Conduct Lessons be correlated?—The teacher so plans that the history lesson and the literature lesson re-enforce the special conduct lesson. The science lessons and the art lessons may be made exceedingly helpful in promoting good conduct. Isolated stories or lessons, however excellent, are waste labour. Correlation and concentration condition efficient teaching.

What Books will help?—No text-book must ever be used. Stories, as a rule, must be told and not read. Detailed lessons as found in books must be used merely as suggestive; spontaneity must characterize conduct lessons. Yet books are exceedingly helpful in the conduct work, and the working library supplements the lessons. For teachers as well as pupils we are getting many helpful books for conduct teaching.

METHODS IN TEACHING HISTORY.

History is the Great Conduct Study.—Philosophically considered, the history studies come as the fifth necessary group of studies; but practical education regards history as the central conduct study. History is the race teaching by experience. We become good citizens because every page of history teaches us that all good comes through law-abiding. History is the story of humane progress. We make progress because we work in the light of all the centuries. History is the world's great character gallery. We make our lives sublime because we live in the presence of the mighty past. History is philosophy teaching by example. We become wise and refined and pure be-

cause our race heritage is the true, the beautiful, and the good. History is cosmic. We become worthy of a place among the immortals because we come to think of the Eternal Energy, from whom all things proceed, as our loving Father; because we come to feel that all men—all other rational beings are our brothers; and because we get to realize that the universe is our everlasting patrimony.

1. *Primary History Methods.* The historic sense becomes active as early as the seventh year, and children begin to be interested in history lessons. The primary teacher studies to give the pupil object lessons in social life. Myths, fairy tales, folklore, biographical stories, historic incidents, are made to lead up to civics and history proper. Child life is made the objective basis of the history lessons. As pupils out of their own experience and the assimilated experience of others create a geography world, so out of their own historic experience and the assimilated historic experience of others they create a history world. The verity of the history story interests the child. The bearing on conduct of adapted history lessons is of paramount value. As the pupil's *Natura* experiences are fundamental in science teaching, so the learner's social experiences must be made the basis of history teaching. The home, the school, the Church, and the state are the social environments of the child, and all true history teaching must be grounded in the pupil's actual experience. What we teach, and when and how, must come in answer to the child's needs. Basing all teaching on the experience of the learner has completely changed our methods of teaching history.

2. *Intermediate Methods in History.* The history story, now taking a wider range, touches the larger life of the pupil. The intermediate teacher plans a course of lessons in general history running through the intermediate period. Hebrew history, Grecian history, Roman history, and the stories of the nations, furnish abundant materials. What lessons will prove most helpful? The course you outline will be your answer. You study to co-ordinate your history lessons, your literature lessons, and your special conduct lessons. The lessons are always conversational, and never degenerate into mere story telling or lectures. The lessons are made especially interesting. Biographical and historical stories and stories of travel enter into the warp and the woof of these lessons. The pupils are led to read interesting books in the line of the lessons. These history lessons are the most fruitful conduct lessons. Before the age of twelve history finds its natural expressions in stories, pictures, plays, and poems, and is at once aesthetic and didactic.

History and literature during the early years seem to blend, but about the age of twelve inference begins to play an important part, and historic study gets to be critical. The pupil begins to make an event give an account of itself, begins to ask what occurred? when? where? how? why? A text-book in American history is studied during the seventh and eighth school years, but oral lessons in general history supplement the bookwork. There is no hurry, no crowding; the pupils live the historic events over again, for they become to them almost as real as the

living present. Imagination is the master builder, nor does history interest the prosy plodder. As we lead each pupil to *create* his own geography world, so we lead each one to *create* his own history world.

By means of historic charts and other devices the pupil is led to realize the unity of history. The blending of the lessons in history and literature and geography is most marked during the intermediate period. The special teachers in these groups plan unity of work.

3. *High-school Methods in History.* About the age of fifteen historic study becomes more and more reflective. Pupils now study the lives of peoples and begin the systematic study of comparative history. They study both general and special history and learn in some degree the art of research.

By giving two weekly recitation periods to history throughout the four high-school years a good foundation in historic study may be laid. No attempt is made to cover all the ground, but the most helpful things are carefully studied. The best in the lives of the best men and the best peoples somehow gets into the lives of the pupils.

4. *College Methods in teaching History.* At eighteen the student begins in earnest to try to master history as a science. Independent research, comparative history, monographical special studies, critical interpretations, are some features of collegiate historic work. It is important that the student devote two weekly recitation periods throughout the four college years to historic studies. Thus will be laid the best basis for life work. The philosophy of history, phil-

osophic history, and original historic investigation come largely as graduate work.

5. *Helps in teaching History.* How can we so teach history as to develop character? This is a vital pedagogical question and will elicit more and more attention as the decades go by. Germany and France and Italy are rich in historic teaching helps. England has taught the world how to write history, but to America belongs the honour of producing ideal school histories. Our recent contributions in methods of teaching history are highly valuable. First of all we have *How to study and teach History*, by B. A. Hinsdale. Next we have *Methods of teaching History*, by G. Stanley Hall. In his *Manual of Methods* A. H. Garlick makes excellent suggestions. *History in the Common Schools*, by Emily J. Rice, and *Unity in College Entrance History*, by Lucy M. Salmon, in *Educational Review*, September, 1896, are counted among the helpful recent contributions. The reports of the Committee of Ten and the Committee of Fifteen will prove of great value to teachers of history.

METHODS OF TEACHING CIVICS.

By civics is meant education for citizenship. We here use civics in a broad sense, so as to include government, economics, patriotism, international policy—lessons that will best prepare pupils for the duties of good citizens. In the lower grades history and civics are blended; but in the seventh and eighth grades and through the four high-school years one recitation period a week should be devoted to civics. In the

college, civics becomes political economy and sociology.

1. *Primary Methods.* Our pupils breathe the atmosphere of citizenship. We lead the little ones to experience law and government. We begin with the family; here the child experiences the elements of all government. The school next enlarges child experience. Then community government, and county, and State, and nation begin to be experienced as the pupils advance. These experience lessons in civics are impressed in connection with the history lessons and literature lessons and the geography lessons. Pupils get into their lives the elements of good citizenship and patriotism. Even thus early they are led to realize that liberty and all good come through law-abiding.

2. *Intermediate Methods.* With the younger pupils the synthetic process is best, but in the seventh and eighth grades the analytic process is used. Pupils may now begin with our national government. It is thought to be safe to use an easy text-book on civil government in the seventh and eighth grades. One lesson a week during these years will do much to prepare our pupils for citizenship.

METHODS IN TEACHING MIND LESSONS.

1. *Primary Mind Lessons.* Self-knowledge is most valuable, for it is the basis of rational conduct. It seems fitting that easy mind lessons should be given in all elementary schools. Pupils stand face to face with the mind world just as they do with the matter world. What appears to them in the matter world is

called physical phenomena, and what appears to them in the mind world is called mental phenomena. We lead pupils to explore the matter world, and we call the work Nature study; we lead them to explore the self-world, and we call the work self-study. Pupils experience sensations, and out of their sensations make their sense notions; they experience awareness, and out of their conscious experiences make their self-ideas. "Mind lessons," says Dr. Münsterberg, "can not come too early." The pupil sees, hears, touches; attends, desires, acts; remembers, dreams, imagines; perceives, conceives, infers; hopes, loves, enjoys. We lead the pupil through his own conscious acts to become acquainted with himself. These lessons are at first given incidentally in connection with the daily work. There must be no definitions, no diagrams, no theories, no hard words, no conscious introspection. Pupils become acquainted with the self-world, just as they become acquainted with the sense world. Self-study goes on side by side with Nature study. The lessons in conduct and history and literature are often the best self-lessons. Mind lessons are as wholesome and helpful as object lessons.

2. *Intermediate Mind Lessons.* During the seventh and eighth years one mind lesson a week is exceedingly helpful. These lessons are based on pupil experience. Nothing is said about soul, or psychology, or faculty. Definitions are not yet thought of. Memory is simply a self-remembering, and judgment is a self-judging, and choice is a self-choosing. These lessons fit into the pupil's life and supplement the lessons in all the other studies. They prepare the pupil

as nothing else can to understand man and history and literature. It is a mistake to send our pupils out into life with vague and often hurtful self-notions. Clear, well-defined elementary self-knowledge is the best preparation for life.

3. *Elementary Psychology.* During the first and second high-school years the mind lessons are given in connection with the study of practical ethics; and during the third and fourth years an easy elementary text-book in experimental and descriptive psychology is studied.

High-school pupils feel an irrepressible longing for deeper insight into the self-world and the social world and the cosmic world. The conduct teacher wisely leads them, and so they become real explorers and not dreamers. Each lesson is based on experience; but the pupil now seeks to enrich his own experiences by the experiences of the race. Each pupil is led to create his own ethics and his own psychology. One lesson a week throughout the four high-school years will ground the pupils in essential self-knowledge, and will work into their lives the best things. In another decade, educators will wonder at the strange neglect of self-study in our nineteenth-century high schools.

4. *Philosophy.* Philosophic methods characterize college work. In the conduct group of studies the practical ethics and elementary psychology of the high school become the psychology, the ethics, the logic, and the philosophy of the college. For convenience we call this master group of studies philosophy. The college student learns to make larger and larger syntheses until he is able to think of all the sciences and of all knowl-

edge as a unit. Led by masters, he finds out what the universe is, and what men have thought and achieved, and slowly creates for himself his own philosophy. It must be best to give to philosophy two weekly recitation periods throughout the college years. Conduct ideals may thus become cosmic; life plans may thus be projected on higher planes; high endeavour may thus get to be habitual.

METHODS IN TEACHING PRACTICAL RELIGION.

Man is a religious being. The conduct cycle embraces self, others, God. Complete living is cosmic. All men love Jesus, for he loved all men. The best in all men is found in Jesus. He lived the one perfect life, and taught the one perfect moral code. Because we think of religion as sectarian, as creed, as dogma, we exclude it from our schools; but practical religion, the life of Jesus, is as broad as the race. Many object to formal religious teaching in our schools, but in all the world is there an enlightened man who does not approve of getting the lessons of the great Teacher into the hearts and lives of our pupils? May not this be found to be the solution of the problem of religion in our schools? Practical religion is to live as Jesus lived. The life of Jesus in our schools would almost infinitely elevate the aspirations and conduct of our pupils.

By stories, by opening songs, by verses read, we lead our pupils to think of Jesus as their best friend. Somehow we lead them to say from the heart, "Give us this day our daily bread," and to feel grateful for all good things. As the child asks its mother to for-

give, so the pupil comes to ask his best Friend to forgive. The past faults pardoned, each morning the pupil begins a new life and tries to live a better life. Herein is law of moral betterment. The teacher tries to live as Jesus lived, and so teaches by example and gentle words and kind acts. In the opening songs the pupils sing practical religion into their hearts. Teacher and pupils repeat or chant the prayer that Jesus taught his pupils to say. There is no formality, no cant, no dogma; but somehow the pupils come to feel the emotions of worship, the highest and most elevating of all emotions. Our public schools are weak in practical religious teaching. Because of the misapprehension that religious teaching is necessarily sectarian, the tendency is to secularize our schools and leave religion to the family and the Church. The larger proportion of our pupils are thus deprived of the most vital element in conduct culture. In some way the family, the school, and the Church should come to work together to get the best into the lives of the young. The life and the lessons of the great Teacher seem to meet all the conditions. Catholic and Protestant, Jew and gentile, atheist and theist, may build together on the Rock of Ages.

PRACTICAL CULTURE OF THE MORAL VIRTUES.

Ethical Culture must be ingrained.—Conduct springs from within. Ethics can not be taught from the outside. Ethical training can not be something of extraneous character, but must be an integral part of the every exercise of daily life—the atmosphere in which one lives—the spirit which one breathes.

With this view of the question, the public schools are pre-eminently the place where opportunity is given for character growing; and if in any respect the output has heretofore been unsatisfactory, it behooves the people to be awake to the necessity of providing conditions that will make all the more powerful this fundamental factor of the American republic.

Ethical Culture comes of doing.—There is ethical value in activity; contrast the lives of the active and the idle. There is ethical value in order; order is law-abiding, and disorder is law-violating. There is ethical value in habit; habit makes or damns. There is ethical value in association; not the monastery, but social life develops the noblest characters; Lincolns and Gladstones grow amid the white heat of battle. There is ethical value in culture; the best in literature and science and art is ethical; compare cultured people with uncultured. There is ethical value in rational recreation; play is sunshine, is divine.

Virtuous Peoples teach the Possibilities of Moral Culture.—As we go to the Spartans to learn the possibilities of physical culture, and to the Athenians to learn the possibilities of aesthetic culture, so we go to the peoples who have exalted the moral virtues to learn the possibilities of ethical culture. History and biography present marvellous object lessons in point. The savage is a savage from habit, for savagery is in the line of least resistance. The unthinking masses move round and round in the treadmill of custom, for this is easier than independent action.

1. *The Jews teach us Fidelity.* For centuries it has cost much to be a Jew, and the story of the Wan-

dering Jew is a striking object lesson of the virtue of fidelity to enlightened conviction. Fidelity grows into a fixed habit. Through all the centuries the profound belief in Jehovah and in the Hebrew Scriptures has made the Jewish people a perpetual miracle.

2. *The Scotch teach us Integrity.* Go to the homes, the schools, and the kirks of Scotland, and you find that integrity in things great and small is every way inculcated. The Scotch are a living object lesson in the practical culture of the moral virtues; the Bible is the moral text-book in the schools of Scotland.

3. *The Quaker teaches us Truthfulness.* His word stands for more than the oaths of other men. Early and always, the Quaker child and youth learns to love truth, and speak and act truth.

4. *The World's Moral Heroes teach us the Moral Virtues.* We study the life of Jesus as the one perfect life. We study the lives of the best women and men, that we may discover how they grew into moral greatness; and herein sacred and classic history and literature must be counted at their highest value.

Ethical Environments favour Ethical Culture.—A moral atmosphere conditions the growth of the moral virtues. A sturdy moral manhood is almost impossible in the midst of moral pestilence. Our first care should be to remove alluring temptations and degrading influences. Moral seclusions are very necessary. The second care should be to throw around the child and youth all favouring influences. Helpful environments, helpful literature, helpful society, helpful work,

are of incalculable value. Our third care should be to incite high purposes and earnest work. The idle classes, rich and poor, are our moral lepers.

Ethical Habits are of Highest Value.—Moral ancestry tends to morality, and practical ethics may gain valuable lessons from the study of heredity. The little child realizes that it ought to obey its parents. This impulse to obey because it ought is conscience. The child thus early gains the intuition of right, and begins to do moral acts. The greatest thing in education is the development of the habit of doing what we believe we ought to do. This is the education of conscience.

Duty is the Keynote in Ethical Culture.—The millions pitch the tune of human conduct too low. They ask, "Will it give me pleasure?" "Will it pay?" "Is it good policy?" The consequent moral degradation is appalling. But duty is the keynote of every grand life. Conscience stands for duty, for it is our capability to feel duty impulses. Find right, choose right, do right, enjoy right, are the mandates of conscience. As the needle points to the pole, so conscience prompts each one to do duty as he understands it. Here all vital moral culture has its root. From infancy to age, the greatest thing in education is so to foster the ethical impulses that they shall become practically imperative in controlling human conduct. The noblest work of God is a man who, from principle and from habit, does what he deems is right. The highest work of the educator is the development of such men and women.

CHAPTER XXVII.

EFFICIENT METHODS OF TEACHING THE LANGUAGE-LITERATURE GROUP OF STUDIES.

Teaching and Learning Processes are ever the Same.—Child and man discriminate and assimilate, perceive and apperceive, analyze and synthetize, induct and deduce. But the child thinks as a child and the man as a man. Teaching leads the child to make its feeble efforts in such ways as to gain power through mastery. Teaching leads girls and boys to make more vigorous efforts, and so to gain greater power through greater mastery. The wise teacher adapts his methods to the pupils and to the conditions.

Languages and Literatures.—Modern insight into the essential unity of literature and language has revolutionized our methods in language-literature teaching. We teach language in teaching literature, and literature in teaching language. We study language and literature rather than languages and literatures. The study of foreign classics re-enforces the study of English classics. The most hurtful mistake of the past was the divorcement of studies organically one.

Courses in Language-Literature.—Schools and colleges are steadily working up to as satisfactory and connected courses of study in English as in mathematics. The work in the elementary school fits into the work of the high school, and the work in the high school fits into the work of the college.

The Language-Literature Group of Studies.

Elementary schools.	Secondary schools.	Colleges.
Eng- lish 1. Reading. 2. Literature. 3. Language. 4. Composition.	Eng- lish 1. Expression. 2. Literature. 3. Language. 4. Rhetoric.	Eng- lish 1. Expression. 2. Literature. 3. Language. 4. Rhetoric.
For- eign Languages and literatures.	For- eign Languages and literatures.	For- eign Languages and literatures.

The language-literature studies are conceded double the recitation time of other study groups; this concession, more than all arguments, emphasizes the belief in the value of this group of studies. In a brief chapter it is fitting that attention should be particularly directed to methods of teaching English in our elementary schools; but we must have in view the advanced work, and the fact that, after the sixth school year, the study of other languages goes on side by side with that of our own.

Special Programme in Language-Literature Studies.—The general programmes give to this group of studies, in all schools below the college, two daily recitation periods. Well-considered special programmes, however, are most important. Each teacher must construct such a programme for herself, but suggestions sometimes help. In the first and second grades the time may be divided about equally between the reading lessons and the language lessons. During the third, fourth, fifth, and sixth years the recitations in reading and literature may alternate, as may the lessons in language and composition. In the seventh

and eighth grades and in the high-school classes one daily period may be devoted to English and one to a foreign language; the work in English during these six years must be judiciously proportioned to teaching expression, literature, language, and composition. Continuity and unity are the important things. The movement to begin Latin or a modern language in the seventh grade tends to become general.

Organic Unity of the Studies in English.—“As to modern methods, the best of all is the teaching of the four related topics of expression, literature, language, and rhetoric as one organic group of studies, wholly interdependent and progressive.” From the kindergarten to the university this is one of the most fruitful educational movements of our times. In school and college the learner at every step is led to pursue these studies as essentially one branch, and as intimately related to all other studies. Specialization is a great educational device, but it has its helpful limits. It hurts when the specialist is narrow; it hurts when a strong specialist unduly pushes his specialty; it hurts when special teachers fail to work together as a teaching unit. In schools in which one competent instructor teaches all the branches the unity of the work is secured; but in specialized intermediate schools, in high schools, and in colleges there needs to be wise concentration. One mind must direct; the teacher of expression, the teacher of literature, the teacher of language, and the teacher of rhetoric must work as a teaching unit—all supplement the work of each.

Teachers of English.—Thorough preparation is indispensable. To-day it is easier to find twenty good Latin teachers than one good teacher of English. But the outlook is cheering. In our high schools and colleges, English is now made the equivalent of the classics. The faculty in English of a certain college now numbers twenty-five instructors. No other group of studies requires broader culture or more thorough special preparation for teaching. With efficient teachers of English in our elementary schools, our pupils will be started right and will be led to lay the best of all foundations for life work and advanced work.

The Library in teaching English.—What the laboratory is in science, the library is in English. Even in the primary the library is remarkably helpful.

"Each teacher," says Dr. W. T. Harris, "should be furnished with a dozen copies each of three or four volumes of selections from the best of classic authors, the selection being made from what is most attractive to children. These should be loaned for home reading to those pupils who prove that they have time to spare for supplementary reading by learning well the regular lessons assigned them in school. Such books of good literature and history are likely to be read at home not only by the pupils, but by the parents and older brothers and sisters, and thus accomplish manifold good. When the set of books in one room is pretty well finished by the pupils in that room, exchange may be made with the next room, and different authors obtained."

The library becomes more and more helpful as the pupils advance. Please read again as a part of this paragraph School Libraries, Chapter IX.

METHODS OF TEACHING READING AND EXPRESSION.

Reading is the key to treasured knowledge, and is the greatest art taught in the schools. We sometimes

group the school studies with reference to use as information studies, disciplinary studies, and culture studies; in each group the good readers greatly surpass the poor ones. In its broad sense, reading includes ability to call the words, grasp the meaning, and express the sentiment.

Reading must be made a Special Study.—Teaching reading incidentally is like teaching algebra incidentally. "The reform of the reading lesson through 'supplementary reading' is the one that I find most liable to abuse. Many teachers have been in the habit of conducting lessons in reading as a mere test of the pupil's acquired ability to read at sight, and not as a means of instructing the pupil how to read well. They have accordingly given the child no lesson to study and prepare for the recitation, but have kept the reading book away from him until the hour of actual trial. Then the books are suddenly placed in the hands of the pupils, and they are expected to 'read at sight.' They read what they have not studied or seen before. The books, too, are not carried home by the pupils to be read in the family, nor are they studied by the pupils at school. Only one step further could be taken in this dire reaction—namely, entirely to abolish instruction in reading and expect the pupil to read newspapers and books 'at sight' whenever he has occasion to do so in after life. I think it is clear enough that reading resembles any other branch of instruction, and is to be learned by *study*, and study too on the part of the pupil. The teacher must teach pupils self-help. Unless something is given for the pupil to prepare in reading, the teacher can not hold him responsible for results, and we have simply what is called a 'pouring-in' process, or the old-fashioned, long since discarded habit of 'reading round,' which was a mere calling of words and a correction of pronunciation."—W. T. HARRIS.

Methods of teaching Primary Reading.—How can we best teach the little ones to read? How can we make learning to read a delight as well as educative? We study the child. How does the baby learn to talk? Just as he learns to walk. As the automatic

muscular movements grow into willed acts, so the instinctive cries develop into intelligent expression. Instinct and imitation and growing intelligence are the factors. As the infant learns to talk so the child learns to read ; it learns to recognise written words as signs of ideas just as it comes to recognise spoken words as symbols of things.

First Step.—We teach the children to find out and to tell about things. The kindergarten does this work admirably. The wise primary teacher keeps the beginner for weeks, and sometimes for months, in this preparatory work. There must be no hurry. To get the children ready to take the next step is a great thing in teaching.

Second Step.—We lead the children to recognise written words as the symbols of ideas. Only words familiar to the ear are introduced at first, and upright script is used, because it is easier, plainer, and more like print. Reading is now the central study, and all other lessons re-enforce the reading lesson. The new word is *bird* ; the science lesson is about birds ; the language lesson gets the pupils to talk about birds ; the literature lesson is a story about birds ; the drawing lesson leads the children to make pictures of birds ; the writing lesson teaches the pupils to write the word birds ; the number lesson asks how many birds. The reading lesson is devoted strictly to teaching reading, and the word *bird* is used with words previously learned in easy sentences. From the first the pupils read as they talk, because the written words are as familiar as the spoken words. When the pupils are ready for it, printed as well as script words are used.

This is the essential step; there should be great discretion and sufficient time; hurry at this stage is inexcusable. In the language lesson, when prepared for it, the pupils are taught to sound as well as write familiar words.

Third Step.—The pupils are led to read well choice child literature. Our school readers, as a rule, furnish suitable reading lessons, but it is best to supplement the readers by the library. To teach the pupils how to read and what to read, and to develop a taste for the best literature is, next to conduct, the greatest work of the primary school.

Helps in teaching Primary Reading.—Detailed methods would be out of place here, but we do most for teachers when we place in their hands excellent manuals by great teachers. We are especially rich in helps for teaching primary reading. For some decades we have been passing through the methods epoch. We began with the A-B-C method; then we had the phonic and phonetic method; then we had the word method; then we had the sentence method; then we had the look-and-say method; then we had the—but it is needless to enumerate all; each had its merits, did its work, and passed away. We now have in lieu of all the special methods what is termed the *combined* method, or the *natural* method, or the *eclectic* method, or the *rational* method. We teach our pupils to read; whatever has been found helpful is utilized. I have found two classes of books suggestive and helpful: first readers and manuals of methods. Our standard first readers with the suggestions of authors are very valuable. Dr. Stanley

Hall's *How to teach Reading* is full of good things; Dr. Hinsdale's *Teaching the Language Arts* has several valuable chapters on teaching reading; Prof. Sinclair's *First Years at School* and A. H. Garlick's *Manual of Method* must prove of great value to teachers. Of the many excellent manuals, teachers must select two or three and study them as suggestive helps. The school journals reflect the living present, and give us the freshest and best things in methods and devices.

Methods in teaching Expression.—Reading in the elementary school becomes expression in the high school and the college. We think of expression as the crowning excellence of the course of study in English. That it should be said that conversation and good reading are lost arts is a severe criticism on our methods of teaching English. From the primary to the university the study of literature and the culture of expression should go on together. The reaction against a boisterous elocution has worked the neglect of expression and even its omission from the courses of study in English in many of our high schools and colleges; but the *renaissance* is beginning; expression and language and literature and composition, in the future, will surely be studied as organically one branch.

METHODS OF TEACHING ENGLISH LITERATURE.

Education prepares pupils to be their utmost through *character*, and to do their utmost through *knowledge*. History and literature do most to pro-

mote these ends. When properly taught, they infuse high ideals, refine, and enoble. They ground pupils in morals and manners, in taste, in religion, in good citizenship. That these studies have not thus been taught must be admitted ; that they may be so taught as to make for good conduct is now being demonstrated in many schools. From the primary to the college efficient methods in teaching literature are demanded.

English Literature stands Pre-eminent. — "When the conceptions of an individual mind are expressed in a permanent form of words, we get literature." In the greatest works we have the best thought with the highest beauty of conception and expression ; we have apples of gold in pictures of silver. English literature is surpassingly rich. It includes the pre-eminent creations of English-speaking authors, and the world's choicest classics transformed into classic English. In a hundred convenient volumes our English-speaking youth may have the best literature produced by the race.

Bad Methods of teaching Literature. — Literature was not studied ; in Shaw's Manual and similar textbooks the history of literature, rather than literature, was taught. Pursuing the methods of the classical teachers has been even a greater mistake. "Classical teachers tend to lay the stress on the grammatical and philological elements of the classics, to the exclusion of the literary elements. Most unfortunately, the classical teacher has stood as the model of the literature teacher. It has been assumed that English literature should be made to answer the same educational

ends as foreign languages, and methods of teaching literature have been chosen with reference to that ideal. The assumption is false and the methods are vicious."—[B. A. Hinsdale.]

Modern Methods of teaching Literature.—Literature is taught. Our best classical teachers now place the stress on the literature. Our best English teachers do not now conceal the literature by their criticisms and comments. The pupil is led to study literature and to get out of it all there is in it for him. In the language and the composition lessons and the expression lessons, all helpful topics are studied ; but in the literature lessons literature is studied, and is so taught as to accomplish its mission.

METHODS OF TEACHING LANGUAGE.

The educator differentiates as well as concentrates. We teach as an organic unit literature, language, composition, and expression ; but in teaching one of these studies we subordinate the others. In the language lesson we lead the pupils to form habits of correct oral and written expression, correct spelling and pronunciation, correct capitalization, and correct punctuation. We teach in the language lessons phonetics and word analysis, and the pupils are taught to use dictionaries. In these lessons we prepare the pupils for the lessons in reading, in literature, and in composition. We quarry and polish the stones which are to be built into the temple. The immense importance of these lessons is apparent. As the pupils advance, we lead them to discover the elements

in the sentence and to distinguish the parts of speech. During the seventh and eighth school years we use a suitable *modern text-book* in English grammar. In place of detailed methods, I submit as a part of this paragraph, *Teaching the Language Arts*, the able work of Dr. B. A. Hinsdale. Teachers are recommended to study also one or more of the excellent language-lesson manuals.

METHODS OF TEACHING COMPOSITION.

The study of English culminates in the composition. The science lessons and the history lessons and the literature lessons furnish information. The language lessons give the pupil command of the sentence. The composition lessons, oral and written, teach the pupils to tell in good form what they know. The reading lessons prepare pupils to read well their own compositions.

The Old and the New.—In the old education the composition writing was a dread; in the new education composition writing is a delight. In the old, pupils were fed on husks, and were required to make bricks without straw; in the new, the science lessons, the literature lessons, and the history lessons make the pupils rich in subject-matter. In the old, the pupil was cramped by rules; in the new, pupils are free to tell in their own ways, but are led to tell in good form. In the old, the pupils were confined to the text-book; in the new, the school library supplements the text-book, and does most to cultivate good English.

Nature Studies and Composition.—During the primary years the science lessons and the composition lessons supplement each other. Children take delight in telling what they find out. Oral composition prepares for written composition. While the science lessons are made the basis of the early composition work, we constantly utilize the history lessons and the literature lessons to the great interest and profit of the pupils.

CHAPTER XXVIII.

EFFICIENT METHODS OF TEACHING SCIENCE.

By the science studies is meant the information studies relating to the physical world. In our elementary schools we designate the science group of studies as Nature studies. The marvellous growth of modern science increases the danger of overcrowding our school courses. Teaching science rather than sciences is thought to be the safe preventive. Teachers are coming to consider the Nature studies as organically one branch of school work. The aim is to so teach essentials as to prepare pupils to become independent in their efforts to gain a mastery over the material universe. There must be no hurry, no crowding; we must so teach a few things as to educate our pupils to work independently and find out all things.

The Committee of Fifteen say: "It is very important to have the science studies cover as fully as possible all the provinces of Nature. There is the inorganic province, containing the two fields of astronomy and physics; and there is the organic or biological province, including botany and zoology." In practical school work the three lines of Nature study cover these provinces. The educational world of to-day agrees substantially in the following scheme:

Science Group of Studies.

Elementary schools	Secondary schools	Colleges
Geography, oral astronomy.	Physical geography, etc., elementary astronomy.	Physiography, geology, astronomy.
Oral biology, oral hygiene.	Elementary biology, etc., elementary physiology.	Advanced biology, advanced physiology.
Oral physics, oral chemistry.	Elementary physics, etc., elementary chemistry.	Physics, chemistry.

Each of the three lines of science work is continuous; the geography and oral astronomy of the elementary school become the physical geography and elementary astronomy of the high school, and the physiography, geology, and astronomy of the college. Biology and physics progress side by side with geography. The fact that the science group of studies has been accorded co-ordinate rank with language and mathematics best expresses the conviction of educators as to its educative value. The scientific method is revolutionary; good science teaching tends to vitalize all teaching. The practical value of the Nature studies is so great that they are called the bread-and-butter

studies. As we come to pursue efficient methods in teaching these studies their great culture value becomes apparent. The culture is different but none the less necessary. We do well to magnify the educational value of the science studies.

SPECIAL PROGRAMMES FOR NATURE STUDIES.

In all schools below the college one daily recitation period is devoted to the science studies. What to teach, and when to teach it, and how to teach it are the vital considerations.

Each teacher, after careful study, constructs a special programme for science work. The best things are selected, proportioned, co-ordinated, correlated. Here, as everywhere, the teacher is entitled to the best suggestive helps. The following manuals for teachers will prove especially helpful both in making programmes and in teaching elementary science:

Nature Study and the Child, by Prof. C. B. Scott. D. C. Heath & Co., Boston.

Nature Studies, by Prof. W. S. Jackman. Henry Holt & Co., New York.

Systematic Science Teaching, by Prof. E. G. Howe. D. Appleton & Co., New York.

These educators have literally worked out ascending spiral programmes covering all the ground. The appropriate work for each month of each of the elementary school years is outlined and illustrated. The Nature studies are skilfully correlated, and the discussion of matter and methods will greatly assist teachers. With these and similar aids it is now pos-

sible for a teacher to make a judicious special programme for the several studies, and, with these aids, she may be able to lead pupils to do the most helpful science work.

EFFICIENT METHODS IN GEOGRAPHY.

The pupil is led to study the earth as the home of man. In the light of experience, personal and appropriated, the child begins to create his world. Imagination is the master builder.

1. *Central.* Geography is the central study in the elementary science group. Pupils are led to explore their environments and gain geographical experience. The lessons about plants and animals and rocks and stars and forces are naturally entwined with the geography lessons.

2. *Correlated.* Geography assimilates with all other studies. Biology is its twin sister, mathematics is its ally, history and civics are its dynamics. All other studies are re-enforced by geography, and geography is enriched by the lessons in the other studies. But in the geography lessons *geography* is taught; everything else is made to help.

3. *Manuals.* Not many decades ago the teaching of geography in our schools was wretched. A great advance has been made. Teachers are coming to know what to teach and how to teach it. The aids for teaching geography are now abundant and excellent. The following manuals for teachers are considered peculiarly helpful:

How to Study and Teach Geography, by F. W. Parker. D. Appleton & Co., New York.

Methods and Aids in Geography, by C. F. King. Lee & Shepard, Boston.

Manual of Methods in Geography, by A. E. Frye. Ginn & Co., Boston.

Teachers will avail themselves of the many valuable aids that the years are furnishing us. Our text-books in geography, as well as our geographical apparatus and our manuals for teachers, are approaching our ideals.

4. *Primary Methods.* Superintendent H. S. Tarbell gives us some valuable suggestions :

"Oral geography comes first; the subject is the home—all that comes within the range of the child's senses. This should come before the book. This home study furnishes the elements for all future study of the world. Whenever anything new is to be taught, begin at home, with what is near and known. When you get beyond the things themselves, then go to pictures and maps, which are nearer the things than are words. Maps should be studied largely, early; read them, picking out natural features first—mountains, rivers, divides, valleys, plateaus, are very important; capes are for the most part of little importance. Every child should have a globe in his hand. He should always think of the world as a globe. Only on a globe can he learn the true direction and relative sizes. Maps can not be put into the geography all on the same scale; but every map should have a scale attached, so many miles to the inch. In the oral lessons the teacher should talk about familiar things first.

"When we come to the book, be careful not to misuse it. It is the first book which the pupil really studies, where he learns how to learn; above all, he should not memorize the text. The child's first mode of learning is by hearing; the ear takes in thought more directly than does the eye. The child should get the thought from speech before he gets it from print. Geography especially helps to observe, to reflect; it is a complete subject, the essential subject for methods. The most stupid thing is for the

teacher to write things on the blackboard, and have the children copy them in notebooks. In giving questions, give such as can be answered after study, but not literally from the book. Each lesson should start with review questions.

"The new geography is that of forces, of how things have come to be, of movement. This is the first part of the study. Later comes descriptive geography, that of localities."

METHODS IN BIOLOGY.

Biology stands for the study of plants and animals. No other studies awaken so much educative interest, or so fully foster pupil growth. As a means for educating pupils to observe and classify, these studies stand pre-eminent. No other studies so naturally and so completely assimilate with all the other study groups.

1. *Evolution.* Biology was not thought of by the old schoolmaster. The crude object lessons, an outgrowth of the Pestalozzian movement, heralded the beginning of better things. Nature study came as the fruit of insight into pupil nature and pupil needs. The systematic study of plants and animals is a marked characteristic of the new education.

In the near past no attempt was made by the great body of our teachers to lead pupils to study Nature. As the century closes, all teachers are trying to lead their pupils to explore the beautiful realms of plant and animal life. As a rule, the teaching of biology at present is far from satisfactory, but it is a beginning. In our modern high schools the science teaching by specialists is a delight. Early in the twentieth century science in our grammar schools will be admirably taught by intermediate

specialists. Soon our primary and our rural teachers will come to teach biology as skilfully as they now teach reading and arithmetic.

2. *Prepared Teachers.* For teaching biology, as thorough preparation is required as for teaching Greek. First of all, the teacher must take a boundless interest in the realms of organic life. Then, under skilful guidance, the teacher must explore the world of plants and animals and gain insight into the economy of organic Nature. Besides, skill in the art of teaching science lessons must be acquired. At present we must be content with some imperfect work, as opportunities for preparation have been wanting. The outlook is cheering. Our future teachers as primary pupils will live close to Nature. Specialists in the intermediate and high schools will lead the pupil on to mastery. Able instructors in the normal school will train the pupils to teach efficiently the Nature studies. Our educational journals, our summer normals, and our faculty work will keep our teachers advancing.

Manuals. We are becoming rich in helpful manuals, and our teachers are entitled to all possible aids. Think of it, most teachers must teach all school branches! How important it is to economize every energy! Each teacher must pursue her own plans, but a really excellent manual is so suggestive and so economical that I submit as a part of this paragraph the chapters on plants and animals in Howe's Systematic Science Teaching. The presentation of matter and method in these chapters must prove of inestimable value to the teachers of our elementary schools. The

manuals referred to on page 332 are especially commended.

Library. The science teaching in our elementary schools is strictly oral, but pupils are led to learn from books as well as from Nature. The pupils are led to read books of exploration and travel, and books about animals and plants. The library supplements the teaching of the school.

Correlation. The biology lessons seem to blend naturally with nearly all other lessons. They enrich and re-enforce the conduct lessons; they enter into the warp and woof of composition and literature; they become an organic part of all other Nature lessons; they illustrate and apply mathematics; they are the soul of art. Nature studies enrich the entire work of teaching and enrich human life. In the art of teaching, correlation is vital, and is the antidote both to waste labour in education and to over crowding.

Physiology and Hygiene. As an important part of the biology work, little by little pupils are led to understand their bodies, and are trained to carry hygienic laws over into hygienic habits. The few lessons given may be of inestimable value. It is not deemed best to unduly extend these lessons in our elementary schools. In the primary the great thing is to secure hygienic habits. In the intermediate, besides fixing all good hygienic habits, the pupils are led to gain a general knowledge of their physical organism and of hygienic laws. The importance of these lessons impresses us when we consider that a vast majority of the grammar-school pupils go directly into life. The wise teacher studies to give them the best things to prepare them

to live hygienically. These lessons supplement the physical-culture lessons, and are re-enforced by the conduct lessons.

METHODS IN PHYSICS.

The physical sciences treat of energy apart from life, and include physics, chemistry, astronomy, and the physical portions of geography, geology, meteorology, and mineralogy. For practical purposes the school world has divided these sciences into two lines of work: the geography line, which includes astronomy and the physical portions of geology, meteorology, and mineralogy; and the physics line, which includes physics and chemistry. The lessons in physics blend readily with all other science lessons, and hence go on side by side with the geography and biology lessons. In our elementary schools some lessons in chemistry are given in connection with the lessons in physics, but oral physics is the leading study.

1. *Value.* "There should be in the elementary school from the first a course in the elements of science. Each science possesses some phases that lie very near the child's life. There should be a spiral course in natural science. A first course should be given in botany, zoölogy, and physics so as to treat of the structure and use of familiar plants and animals and the explanation of physical phenomena as seen in the child's playthings, domestic machinery, etc."—*Committee of Fifteen.*

"No other subject gives such breadth of development as physics. The knowledge which a pupil gains

by observation and experiment is a knowledge which may be applied in untold ways."—E. R. SHAW.

2. *Helps.* The elementary work is strictly oral. The teacher must use great discretion in the selection of topics. I find no special manuals for teachers, but we have excellent books giving the subject-matter and suggesting methods. The following are taken from a list of many good works:

Physics by Experiment, by E. R. Shaw. Effingham, Maynard & Co., New York.

Gifford's Elementary Lessons in Physics: Thompson, Brown & Co., Boston.

Avery's School Physics: Sheldon & Co., New York.

With the help of such suggestive works the teacher may plan his course of lessons in physics and do good teaching. The courses in elementary physics in our summer normals are of great value.

3. *Observation and Experiment.* The lessons are so taught that pupils learn to observe and test things for themselves. The easy experiments, as far as possible, should be made by the pupils. In the primary course pupils gain experience; theory and explanation will usually hurt and not help. In the intermediate course pupils begin to understand laws and explanations, but the work is limited to essentials. We prepare our pupils to go out into life interested observers and discriminating experimenters. A good foundation is laid in experience.

4. *Apparatus.* Simple and inexpensive apparatus is the best. Grammar-school pupils will readily make most of the apparatus needed. Still, in our times necessary apparatus is good economy. The essential

thing is the use of the apparatus by the pupils. By all means lead each pupil to perform each experiment.

5. *Correlation.* Arithmetic, concrete geometry, drawing, physics—these studies naturally and helpfully supplement each other. Many examples in arithmetic may properly be taken from the lessons in physics. The things learned in the lessons about light, heat, electricity, sound, etc., enter into nearly all other lessons.

RESULTS OF SYSTEMATIC SCIENCE TEACHING.

The most astonishing result of good science teaching is the increased interest in the other studies. The facts and methods of science are wonderfully invigorating and inspiring. "Pupils, when science is properly taught, develop remarkable powers of observation, for they learn to think about what they see; they apperceive as well as perceive. They learn to think facts into system, so that each fact throws light on the other facts, and thus all facts help to explain each." The inborn love of birds and flowers is awakened, and a loving interest in all Nature is quickened so that pupils come to find in Nature studies boundless resources for enjoyment. Just now the educator studies with profound interest the schools in which science is well taught in comparison with other schools. The marked betterment in the moral, intellectual, and practical lives of the pupils is apparent. The study of science in connection with the other study groups does much to make life worth living.

CHAPTER XXIX.

EFFICIENT METHODS OF TEACHING MATHEMATICS.

SCHOOL and college courses place mathematics side by side with literature and science. "The study of mathematics has an educational value as contributing knowledge, discipline, and culture. Since mathematical science is the instrument of measurement or measurement by computation, it has a knowledge value which is illustrated in all the vocations of life. Without it science and civilization would be impossible and commerce would be a dream. The concepts of number and space, the simplest of all abstract notions, are combined by the simplest logical processes; hence mathematical studies afford the easiest and most natural introduction to the severe abstract studies." (J. M. Taylor, in *School Review*.) In no other studies do pupils so readily acquire habits of systematic, persistent, and concentrated application.

Mathematics Group of Studies.

Elementary schools.	High schools.	Colleges.
Arithmetic, algebra begun.	Algebra, arithmetic.	Higher algebra, calculus.
Concrete geometry, oral trigonometry.	Demonstrative geometry, trigonometry.	Intuitive geometry, trigonometry, etc.

The two lines of study are continuous and are interlaced at every step. The work in the elementary school is largely objective and practical, but in the

high school it is demonstrative. The elementary studies prepare the pupils for advanced work as well as for practical life.

SPECIAL PROGRAMMES FOR THE MATHEMATICS STUDIES.

Each teacher prepares a specific programme for the lessons in mathematics, designating the time to be given to each subject. Nearly all educators now agree that one daily recitation period, during the elementary and high-school years, should be devoted to mathematics; but all do not agree as to the time to be given to each line of work. Conditions modify to some extent our plans. The following scheme, it is claimed, has much to commend it: Below the seventh grade, four weekly recitation periods are devoted to arithmetic and one to concrete geometry. In the seventh grade two periods are devoted to arithmetic, two to beginning algebra, and one to concrete geometry. In the eighth grade three periods are given to introductory algebra, one to arithmetic, and one to concrete geometry. In the seventh and eighth grades some lessons in oral trigonometry are given in connection with concrete geometry, and some lessons in bookkeeping are given in connection with arithmetic. During the first year in the high school three periods are devoted to algebra, one to arithmetic, and one to concrete geometry. During the second high-school year four periods are devoted to geometry and one to algebra. During the third high-school year two periods are given to geometry, two to algebra, and one to applied mathematics. During the fourth high-school year three periods are given to trigonometry.

and two to applied mathematics. Each teacher will study to do most for his pupils and will vary the programme to suit the conditions. The gains from continuous interlaced work are very great.

Helps in teaching Mathematics.—We gather into helpful books the lessons learned from the masters. Each teacher may now work in the light of human experience. No teacher can afford to disregard these helps.

Methods in Mathematics. Report of the Committee of Ten. American Book Company, Cincinnati.

History and Methods of Arithmetic, Algebra, Geometry, by Superintendent J. M. Greenwood. Sheldon & Co., New York.

The Teacher's Outfit in Mathematics, by J. M. Taylor. School Review, Chicago.

Methods in Mathematics is submitted as a part of this chapter. In the second book named, Superintendent Greenwood gives us a most interesting history of the mathematics studies and presents practical methods of teaching these branches. From many sources teachers will gain helpful suggestions.

Preparation for teaching Mathematics.—Nearly all teachers must to some extent teach mathematics. Special preparation conditions good teaching. In no other studies is there so much danger from presumption. Attention is directed to some items in the work of preparation.

1. *Appreciation.* In no other group of studies does so much depend on the appreciation of the subject and the enthusiasm of the teacher. There is a joy in peaceful mathematics. "God geometrizes continually, and to study geometry is to think the thoughts

of God after him," was the conception of Plato. With a high conception of the grandeur of this realm of knowledge and with a high ideal of the art of teaching mathematics one can inspire and lead his pupils. The true teacher feels a delight in the mathematics lessons that the machine teacher never dreams of. *Appreciation is vital.*

2. *Mastery.* The elementary teacher must know arithmetic, algebra, geometry, and trigonometry as sciences in order to teach well arithmetic and concrete geometry. He must also take a lively interest in the application of mathematics in science and in business life. A mere superficial memory knowledge is utterly inadequate. *Mastery is essential.*

3. *Psychology.* The teacher must know the pupil as well as mathematics. Education is a rational process, and lawful effort develops power. Teacher sympathies encourage the pupils, and teacher intelligence adapts the work to the learner and guides the efforts of the pupils. The prepared teacher understands his pupils and has gained insight into the psychology of mathematics and its applications in teaching this group of studies. *Insight is fundamental.*

4. *History.* The story of the evolution of mathematics attracts the teacher. Its growth from a rude beginning to a boundless realm of knowledge is more wonderful than romance. Incidents from this history will enthuse pupils. Teachers gain much by approaching the work from the historic standpoint. *Historic knowledge helps.*

5. *Teaching.* Teaching is the art of leading pupils to develop power through mastery. Methods are

based on principles. Each lesson is a new creation. All routine, all nostrum devices, all mechanical methods, and all educational quackery are utterly detested. The teacher is an artist, and so leads the pupil to mastery with the minimum expenditure of time and energy. However gifted and however learned, no one unskilled in teaching is prepared to teach mathematics. *Skill in teaching is the crowning preparation.*

Methods of teaching Arithmetic. -The arithmetic teaching of the old schoolmaster was bad, yet pupils learned to compute. The waste in time and energy, it is true, was enormous, and the ordinary attainments were meagre. The betterment in arithmetic teaching during the last half of the century has been noteworthy. Many causes have combined to promote this improvement. The multiplication of graded and normal schools, the creation of teachers' associations, institutes, and summer schools of pedagogy; the publication of improved text-books and manuals, and the circulation of progressive school journals are some of the influences that have worked this result. Arithmetic is now fairly well taught in our schools. Though the teaching is not quite ideal, it is believed that arithmetic is now better taught in our elementary schools than any other branch of study.

THE ARITHMETIC WORK IN ELEMENTARY SCHOOLS.

For six years, four weekly recitation periods are devoted to arithmetic. During the seventh and eighth years four weekly periods are given to arithmetic and introductory algebra. The so-called mental and written arithmetic are united in each recitation. The

former practice of having two daily recitations—one in mental and one in written arithmetic—has been abandoned by most teachers. Our modern text-books omit the puzzles, numerical conundrums, and antiquated topics of the old arithmetics. Those who protest against giving so much time to arithmetic will do well to study the educative and practical value of this branch. Arithmetic is the logic of the elementary school and the key to the Nature studies. It is the best means for developing habits of concentration and continuous attention. It is thought that the time now accorded to arithmetic in our best schools is ample, but that further reduction is not permissible.

HELPS IN TEACHING ARITHMETIC.

Work and Methods in Arithmetic, Reports of Committees of Ten and Fifteen. American Book Co., New York.

Psychology of Number and its Applications to Methods of teaching Arithmetic, by McLellan and Dewey. D. Appleton & Co., New York.

Manual of Methods in Arithmetic, by A. H. Garlick. Longmans, Green & Co., New York.

In the reports named, teachers get the maturest plans in the briefest space. The second book named marks an epoch in the art of teaching all subjects.

The authors so develop the psychology of number and its applications to methods of teaching arithmetic that a similar treatment of all other school studies is made necessary. The result will be the discarding of unsound empirical methods and the substituting of scientific methods. Nowhere else have I found arithmetic so well taught as in the Kansas City, Mo.,

schools. Superintendent J. M. Greenwood, in the Report of the United States Commissioner of Education for 1893-'94, has given a large number of *verbatim* reports of recitations in arithmetic, in different grades and different schools. I commend these lessons as highly instructive and suggestive. Such admirable works as Dr. E. E. White's Manual of Methods in Arithmetic deserve a place in the outfit of every elementary teacher.

PRIMARY METHODS IN ARITHMETIC.

Three distinct methods are used in teaching primary arithmetic. METHODS. { Method of symbols.
{ Method of things.
{ Method of thought.

1. *Method of Symbols.* The old schoolmaster used the method of symbols. The natural genesis and use of number was not thought of, and so the symbols were treated as entities. This method was mechanical and artificial. Tables and rules were committed to memory; operations were mechanical applications of rules. The number of routine teachers who are slaves to the method of symbols is still far too large, but the method has practically disappeared from our modern schools.

2. *Method of Things.* Transition teachers used the method of things. This was called the object method, as number was thought of as a property of objects. Number was made meaningless. Practically, this method was an immense improvement, but it made mental activity incidental, and so failed to build on the rock. Many of our teachers still use the method

of things, but the transition to better teaching is rapidly going on.

3. *Method of Thought.* The wise teacher uses the rational method. Things and measurements occasion insight into the world of much and many. A prepared pupil, in dealing with objects, gains the number idea by direct insight. The actual use of certain things in reaching a certain end occasions the rise of the number idea. The pupil experiences things involving number and gets intuitively the number idea. Number is a mode of measuring values, and a prepared mind dealing with objects originates the number notions. Things occasion number ideas and symbols stand for these ideas. Every step in arithmetic is rational, and is easily taken by the prepared pupil. The rational method leads the pupil to create his arithmetic. Myriads of absurd notions and hurtful devices, like mist before the rising sun, fade away in the light of the rational method.

First and Second Years. At six, pupils have gained the number idea, and may now profitably advance by easy steps. The number lessons are the easiest of all lessons. The work is strictly oral, and is skilfully adapted to the pupils. There is no hurry. A few things are well taught. The pupils now live in the world of things. During these beginning years the lessons are about the child world, and are all natural and easy. Correlation of studies is now complete, for the number work seems to naturally enter into all the other work. Pupils continually measure and weigh and group and count. No definitions or rules or logical explanations are yet thought

of, but the work is rational and leads on to higher work. Right habits are now formed, and a solid foundation is laid.

Third and Fourth Years. An easy progressive primary arithmetic, in which the oral and written work are combined, now supplements the work of the teacher. The correlation of the studies continues to be almost complete. The examples are drawn largely from the other studies. There is no hurry and no crowding; all lessons are easy and suitable. Pupils readily learn fractions. In connection with decimals, the metric system is learned. Definitions and rules and formal explanations are still deferred; pupils, however, learn to think, learn accuracy, learn to work rapidly. Measuring and weighing is daily work, and a good foundation is laid for advanced work.

METHODS IN ADVANCED ARITHMETIC.

We think of pure ARITHMETIC. { Pure arithmetic.
arithmetic as the science of numbers, and of applied arithmetic as its applications to particular calculations concerning lines, surfaces, solids, times, forces, money values, etc. This distinction will simplify the work and economize time and energy. The advanced arithmetic is begun in the fifth grade and is studied for four years.

I. Ideal Text-book.—We will have two books in our ideal series—a primary arithmetic for the third and fourth grades, and an advanced arithmetic for the four grammar-school grades. Some of the characteristics of the advanced arithmetic, it is thought, will be as follows:

1. *It will not be a Large Book.* It will include essentials presented in good form, but will omit rubbish. Extraneous topics, conundrums, definitions, rules, answers, and tedious details will be left out. It will be an inviting text-book, and will be supplemented by the teacher and the pupils.

2. *It will be Modern.* It will be up to date. The examples will represent the living present. The metric system will be taught as an application of decimals. Our antiquated tables will be consigned to antiquarian research, and the lingering relics of outgrown things will be replaced by things of to-day.

3. *It will combine Oral and Written Arithmetic.* This is counted an educational *desideratum*. Suitable alternate examples for oral and written work will be skilfully united from the first to the last page. It will displace the old mental and written arithmetics that still linger in some of our schools.

4. *The Equation will be used.* Even in the sixth grade equations will be used to some extent. In the seventh and eighth grades the work in arithmetic and introductory algebra will go on together. This feature will have great educational significance. The interlacing of related studies characterizes the new education.

5. *Applied Arithmetic will have its Place.* As applications of percentage, we will have interest, commission, discount, etc. Easy bookkeeping, metric geometry, and the lessons in physics will be some of the helpful work in applied arithmetic.

6. *It will, above all, foster Thinking.* Supplemented by good teaching, it will lead pupils to make

their own definitions and rules. It will develop the spirit of sturdy self-reliance and pluck. It will encourage research by starting inquiries and leaving pupils to find out. We now have a considerable number of arithmetics that approximate our ideal. Teacher, please refrain from writing another arithmetic; what we want is good teaching.

II. Arithmetical Correlations. The applications of arithmetic in other studies largely increases the interest and greatly enhances the value of this study. We carefully guard against extremes, but the natural and helpful applications of arithmetic are without limit. Metric geometry affords a wide field for helpful applications of arithmetic. Business gives boundless opportunities for applied arithmetic. The lessons in physics call for helpful applications of arithmetic. The gains from legitimate correlations are so marked that it is surprising to find so many teachers still adhering to the "isolation device" of our ancestors.

III. Objective and Practical Work.—Pupils in our elementary schools seek to know rather than to prove. The instruction should be objective and practical, but educative. Intelligent guidance is essential. By trial, by measurement, by constructions, the pupil should be led to discover for himself the simple truths and operations of arithmetic. Pupils should be led to apply the lessons learned in manifold ways. Good teaching helps the pupil to gain insight and to make his own definitions and rules. Original work is fostered. Pupils are encouraged to do effective thinking. The inferences in pure arithmetic are easy, but applied arithmetic demands the most vigorous thought.

of the pupil. For extended treatment of methods in arithmetic we must again refer teachers to valuable manuals prepared by able educators.

METHODS IN INTRODUCTORY ALGEBRA AND CONCRETE GEOMETRY.

We are learning to treat the mathematics group of studies as one branch. Our pupils come to think of arithmetic and algebra and geometry as one study.

1. *Introductory Algebra.* Algebra uses the symbols of arithmetic, but algebraic statements are general while arithmetical statements are particular. It is well to get elementary pupils to think of algebra as general arithmetic. The use of letters and the equation will sufficiently illustrate the distinction. To a limited extent it is safe to begin to use the equation in the sixth grade. In the seventh and eighth grades arithmetic and algebra are studied together. The advantages of this plan are apparent. In the high school algebra is pursued as a demonstrative science but in the elementary school the method of arithmetic is used, at least in part. In the eighth year the transition is made. We carefully avoid the danger of pushing algebra too far.

2. *Concrete Geometry.* These lessons are of great practical value, but we must keep in view that they are introductory to demonstrative geometry. As in arithmetic, the work is objective and practical. "The whole work in concrete geometry will connect itself on the one side with the work of arithmetic and on the other with elementary instruction in physics. With the study of arithmetic is therefore to

be intimately associated the study of algebraic signs and forms, of concrete geometry and physics. This is a striking instance of the interlacing of subjects which seem so desirable." (Committee of Ten.) In concrete geometry, as well as in arithmetic, pupils are led to use linear equations and the literal notation. For full treatment, teachers are referred to the excellent manuals for teaching concrete geometry. The aim here is to interest all teachers in the forward movement for interlacing the studies of arithmetic, algebra, and geometry in our elementary schools.

CHAPTER XXX.

EFFICIENT METHODS OF TEACHING THE SCHOOL ARTS.

TEACHING includes all art, for it is the art of manhood. The teacher is an artist, and she fosters the art spirit in all school work. She leads her pupils to create as well as to appreciate.

The School Arts.

Elementary schools.	High schools	Colleges.
Physical culture.	Physical culture.	Physical culture.
Vocal culture.	Vocal culture.	Vocal culture.
Manu-mental culture.	Manu-mental cul- ture.	Manu-mental cul- ture.

The three lines of art study are co-ordinate, continuous, and progressive. Each begins in the nursery and

goes on through all the school and college years. For practical reasons the language arts are included in the language-literature group of studies. The three lines of art work are organically one branch of study; each contributes to make the most of the body. The educative value of the art studies is coming to be recognised, and these studies are now given a place in all modern school and college programmes.

SPECIAL ART PROGRAMME FOR ELEMENTARY SCHOOLS.

In many of our best schools, ungraded and graded, two daily recitation periods are now given to the art work: one to physical and vocal culture and one to manu-mental culture. The lessons in physical and vocal culture are given on alternate days and are supplemented by brief daily exercises. The hourly recesses and the home exercises are counted as a part of the physical-culture work. The manu-mental culture lessons come daily; besides, in the seventh and eighth grades, on alternate Saturdays, two hours are devoted to manual training. The results are highly satisfactory; instead of retarding, the art work facilitates progress in the other studies. Educators are coming to agree that while nothing is lost, the gain from the art studies in our schools is immense.

SPECIAL PREPARATION FOR TEACHING THE SCHOOL ARTS.

To teach the school arts well requires as thorough preparation as for teaching the science studies. As a basis, the teacher must understand the physical and mental economies and the stages and laws of physical

and mental growth. Then each line of art work must be in some degree mastered. Above all, leadership in the art work requires an absorbing interest in the art studies. Special training in teaching each line of art work is essential.

In art teaching as in Nature teaching we have at present three classes of teachers. First, we have the untrained teachers, who do the best they can ; next we have the partially trained teachers, who do reasonably good work ; and next we have the skilled art teachers, who inspire a love for the art work and who lead pupils on to success. In another decade, teachers will come up to our normal schools through our specialized intermediate and high schools, and skilled art teachers will become the rule. Our summer normals are doing a great work in improving art teaching all along the line, and our school journals are admirably supplementing all the other instrumentalities for fostering preparation for art teaching.

ART TEACHING IN SPECIALIZED INTERMEDIATE SCHOOLS.

The school arts constitute a splendid group of studies for an intermediate specialist. The three lines of work are organically one branch of study. All tend to so develop and train the body as to make it the fittest instrument for the mind to work in and through. The intermediate specialist profoundly studies the physical economy and the school arts, and she gives her best energies to promoting physical vigour, vocal culture, and manual art. She is able to do vastly more for pupil betterment than a teacher

who has to teach all the school studies, and who can give but a fraction of her energies to the art work. The intermediate art specialist has each pupil one hour daily for four years. The benefits of four years of systematic and skilful art training are simply incalculable. The earnest teacher who instructs in all the branches can do much to interest and guide her pupils in the art work, but the specialist can do vastly more for her pupils. (Read Chapter XXIII.)

PHYSICAL CULTURE DEMANDS.

Physical vigour is fundamental in education. In order to achieve, one must be able to do and to endure. Physical culture is the art of making most of our bodies.

Hygienic Conditions.—Favourable environments are conditions of health and growth. Let us turn back and reread School Hygiene, Chapter IV. How may we help to secure better hygienic conditions? Home hygiene is as necessary as school hygiene. Through our pupils, through lectures, and through the press we can do much to promote better home hygiene. We hold ourselves responsible in part for our school environments. The best exercise will not help much in cheerless, filthy, poorly heated, and poorly lighted schoolrooms.

Hygienic Habits.—We do most for the physical well-being of our pupils when we lead them to form good hygienic habits (see page 49). We not only teach our pupils the laws of health, but we also get them to live these laws. The conduct lessons and the science lessons are re-enforced by the physical-culture lessons.

Physical training best expresses the art work in physical culture. The little ones in the kindergarten and the primary schools are literally trained into hygienic habits, but intelligent self-training characterizes the intermediate and high-school physical culture work. The best hygienic habits formed in the primary and intermediate become fixed in the high school and the college; they literally become life habits.

Physiology of Exercise. - We study the nature of exercise and we gain insight into the philosophy of education. Fatigue, rest, growth—these processes constitute an interesting chapter in the story of human development. *Physiology of Bodily Exercise*, by Ferdinand Lagrange, International Scientific Series,* is submitted as a part of this topic.

1. *Fatigue.* Nerve cells are exhausted by effort. Exertion reduces these cells nearly one half in quality and quantity. The process of exhausting nerve cells is called fatigue, and we use this term to represent exercise as well as its results. Fatigue reduces the bulk and the structure of nerve cells. When normal rest repairs the exhausted nerve cells and restores physical vigour, the fatigue is normal; when it does not do this, the fatigue is abnormal. Overexertion or underexertion tends to produce the tired feeling called morbid fatigue. Not to heed the danger signal of morbid fatigue is a fatal blunder. The workman from necessity and the sportsman from excessive ardour carry exertion beyond the normal-fatigue limit and so produce morbid fatigue and disease and death.

2. *Rest.* Repose restores the broken-down nerve cells. After refreshing sleep we awake rested, reinvigorated. Rest stands for the process of restoring broken-down nerve cells as well as for the result. Normal rest restores vigour. Insufficient or excessive rest is abnormal. Normal rest balances normal fatigue. Normal rest strengthens, but abnormal rest weakens. Excessive sleeping or waking rest tends to produce abnormal fatigue with its train of maladies.

3. *Growth.* Effort exhausts, repose restores, growth results. This sentence is the text for a hundred volumes. Teacher, ponder it well, and write your views in an essay to read to your fellow-teachers. Normal fatigue and normal rest condition health and growth. We lead our pupils to do their best when at their best; we thus promote healthy and vigorous growth. Development through fatigue and rest greatly interests us, for it brings us very near the heart of things. What mighty truths seem about to emerge!

4. *Drudgery.* Effort continued after the normal-fatigue limit has been reached is drudgery. Drudgery hurts and does not help. Work, when teacher and pupils are fresh, educates; work when teacher and pupils are fatigued is drudgery and tends to dwarf. The wearing drudgery of so much of our school work is appalling. Through stupid methods of studying, of teaching, of examining, of reporting, of marking, and of promoting, our teachers and our pupils are often made drudges. Teachers must be quick to perceive when the normal-fatigue limit has been reached. School drudgery must go.

Teacher, the study of fatigue and rest may save

you and your pupils from many hurtful devices. You will carefully plan to have restful recitations follow exhausting studies, and you will arrange to have rest follow work. You will prize the hourly recess as the school safety-valve. You will study to keep your pupils and yourself fresh and happy.

Objectionable Exercises.—School and college exercises in physical training must tend to promote physical vigour, must reach the body of learners, and must be free from injurious tendencies. However popular uneducative games may be, the teacher does not hesitate in his disapproval. We venture to call attention to some classes of exercises deemed harmful.

1. *Vicarious.* Physical culture is a personal matter. It means bodily exercise for the purpose of perfecting the physical organism by increasing health, strength, and skill. A team, or a crew, or a club may represent, but can not help the student body. Vicarious athletics can not be classed as school exercises. Modern football, the regatta, and all similar games are strictly vicarious athletics. The lovers of sport think of these games as they do of the turf and the ring, but they do not consider them, in any true sense, school games. They may deepen the interest felt in physical culture and manly sports, but can do nothing more. They do not help the student body.

2. *Brutalizing.* The heavy competitive athletics of the Spartans, the gladiatorial contests of the Romans, and the bull fights of the Spaniards, tended to brutalize the participants and the spectators. However great their claims for physical culture and the development of manly courage, the brutalizing tendencies

of the ring and the gridiron seem to be irredeemable. On this ground, sooner or later, we must reject as school games all brutalizing contests.

3. *Excessive.* Games that exhaust are objectionable. A severe game of football makes efficient study impossible for hours, and even days. Suitable school exercises tend to develop and refine the whole person, but do not exhaust. When the tendency of an exercise is to abnormal fatigue it should be modified or rejected. Exercises must tend to better fit the student for efficient study. Games, such as chess, checkers, cards, and dominoes, that give too little exercise, must be rejected as games for students. They waste precious time and more precious energy and give no invigorating returns.

4. *Military.* Military tactics are unobjectionable as to the above counts, and in many respects, are desirable as school exercises. However, it is believed that educators will ultimately reject dancing, and military tactics and boxing as school exercises for two reasons: (1) They are not the best available exercises for promoting physical vigour, grace, and skill; (2) their tendencies are not so wholesome and desirable as graded gymnastic exercises. For sufficient reasons boxing and dancing have been, as a rule, rejected as school exercises. I do not doubt that military tactics will share the fate of dancing and boxing when tested in the light of experience and the spirit of our civilization. Civic culture in our times is vastly more important than military culture. We must work to develop the grandest manhood. Our pupils are entitled to the best. But we must not antagonize helpful

movements by our factious opposition ; we are bound, however, to do what we can to replace hurtful exercises by helpful exercises. Our pupils are entitled to the best things.

EFFICIENT METHODS IN PHYSICAL TRAINING.

Physical vigour is our ideal. The Spartans developed physical prowess, the Athenians physical beauty, and the Romans iron endurance. Our civilization demands the high thinking of the Athenians and the iron endurance of the Romans rather than the physical prowess of the Spartans. In the arts of peace and war, brains and implements are now supreme. The age of brute force is past. The manly men and the womanly women now are the brave thinkers and the noble doers. Jesus is our ideal of a manly man. Physical training is the art of developing a vigorous physical manhood. Exercise is the means. Well-directed physical effort makes for growth and vigour. The body is so developed and trained as to be the fittest instrument for a self to work in and through.

1. *Adapted Exercises.* The physical exercises should be as wisely adapted to the physical condition of the pupil as the mental exercises to his mental condition. The light exercises and the invigorating plays of the kindergarten and the primary school are adapted to the little ones. The more vigorous and varied exercises of our grammar schools are adapted to the girls and boys. The invigorating exercises of the high schools are adapted to the youths. The helpful athletics of our colleges are adapted to young

women and young men. The graded system of exercises worked out by Carl Betz, director of physical culture in the Kansas City, Missouri, schools, is admirable in theory and practice. It is based on the principles of the German system, but is completely adapted to the wants of our schools. The Emerson system of physical culture skilfully adapts the exercises to the growing pupils. Other excellent systems now in use give satisfactory results. But most depends on the teacher. Only the wise teacher can adapt the exercises to classes of pupils and to individual pupils.

2. *Outdoor School Exercises.* The hourly recess in elementary and high schools is a physical-culture imperative. No other device can do so much to keep pupils fresh and happy. Real recreation must follow work. Rest must balance fatigue and drudgery must be made to disappear from the schoolroom. The benefits from systematic exercise are manifold, but the free exercises of the playground and the home must supplement the systematic exercises of the schoolroom. Outdoor exercises are most helpful, and when conditions justify, it is every way best to have some of the systematic exercises in the open air. We plan to have the free exercises of the recess follow these outdoor systematic exercises.

3. *Spontaneity.* It must be so managed that pupils will engage with zest in the exercises. The play spirit must in some way be infused into the systematic exercises. Glad efforts develop power. The kindergarten exercises are ideal. The same is true of the exercises in many of our primary schools. Only in our grammar and high schools do the exercises

tend to become mechanical and irksome, and hence comparatively unprofitable. It is believed that adapted and varied exercises, skilfully managed, may be made a delight to advanced pupils and college students; self-training is educative.

4. *Habitual Home Exercises.* Here we get the best. As we do most for our pupils intellectually by fostering studious habits and broad interest, so we do most to promote their physical well-being by leading them to form permanent hygienic habits. Exercise is not a fetish; self-effort promotes growth and vigour, but exercises must be fitting. Unfitting exercises, like wrong medicines, work injury. We interest each intermediate- and high-school pupil in his personal problem. Each asks, "How can I make most of myself?" To begin, each one must make most of his body through exercise. Pupils thus interested enter with zest into the school exercises. What is far more important, they develop habits of systematic home exercise. Each, after long trial and much consultation, decides on a life plan for taking regular exercise.

(1) *Home Gymnastics.* Pledge: "I will devote fifteen minutes daily to systematic exercises." Some exercise that calls into play the entire body is selected. Prof. R. L. Brown at eighty-three was an efficient college professor. "Since boyhood," he tells us, "I have taken exercise with Indian clubs fifteen minutes daily. To this exercise and my daily walks I attribute my ability to work on." In life, as in school, systematic exercise makes the difference between success and failure.

(2) *Walking.* Pledge: "I will walk one mile daily." What have been the exercises of great men? Kant got his gymnastics in his daily lectures, and for fourscore years kept up his vigour by long daily walks. The constitutional walks of Bismarck and other great men are proverbial. Walking is one of the very best of all exercises and should be practised as a fine art. It is a great thing to get this pledge into the lives of our pupils.

(3) *Cycling.* Pledge: "I will cycle two miles daily." The bicycle seems to have come to stay. Cycling is claimed by Miss Frances Willard and an innumerable host of experts as an ideal exercise. Bicycles are becoming so cheap that nearly every pupil over ten years of age will be able to own or secure the use of a bicycle. Cycling supplements walking.

(4) *Working.* Pledge: "I will work thirty minutes daily." Home duties supplement but do not take the place of systematic exercises. Every child should be trained to work. In the golden age of Athens each Athenian youth was required to learn a trade. Rural industries have large educative values. The habit of doing regularly real work is highly important. Work promotes growth and vigour when the laws of fatigue and rest are observed. The teacher by example and by precept should dignify work. Chopping was the favourite work of Greeley and Gladstone. Paul made tents. We may so manage as to lead most of our grammar- and high-school pupils to embody the four pledges in habits which they will keep up through college and through life. In so

doing we shall certainly enable them almost to double their vigour and their worth.

(5) *Rowing, etc.* Many excellent exercises, like rowing and horseback riding, may be considered. Some may profitably substitute rowing for cycling; horseback riding may be chosen by some instead of cycling; or these exercises may be taken on alternate days. Such games as croquet and tennis should be encouraged.

Interest in Physical Culture.—Pupil study, physiological psychology, and a truer philosophy of education have awakened a lively interest in the physical improvement of the race. That physical betterment conditions mental and moral betterment is now accepted as an educational axiom. The educational press leads in many helpful suggestions and supplements the many valuable manuals on physical culture. The earnest teacher will study to become an artist in promoting physical as well as mental and moral culture.

EFFICIENT METHODS OF TEACHING VOCAL MUSIC.

The educative value of vocal music is very great. The culture of the ennobling emotions is as important as the culture of reason. Man is a social being and music and conversation are pre-eminently the social arts. Vocal culture makes us companionable. Song and story are the sunshine of the home and the school. Vocal culture does much to make life worth living.

1. *Course in Music.* The little kindergartners sing just as the birds sing. They are happy and ex-

press their joy in song and play. The children during the first and second primary years express their joys in song and play and story as in the kindergarten ; but when the pupils are ready for it, they are led to read easy music just as they are led to read easy print. Theory and definitions are not thought of. During the third, fourth, fifth, sixth, seventh, and eighth years, the graded lessons in music are mastered side by side with the graded lessons in mathematics and science. Throughout the four high-school years and the four college years the students have two lessons each week in vocal culture—one in music and one in expression.

2. *Teacher Preparation.* No other musical instrument equals the human voice. Vocal culture is the most desirable of all accomplishments and one of the most essential preparations for teaching. The preparation for teaching vocal music should be as thorough as the preparation for teaching Latin. The culture is its own reward. Each primary teacher must be a lover of song and story and play as well as a lover of children. Teachers in ungraded schools should be able to teach music as skilfully as they teach arithmetic. In another decade teachers of vocal music in our intermediate schools as now in our high schools will be specialists, but vocal culture will be sought by all teachers.

Class Methods. Here as everywhere the earnest teacher learns from the masters. Teaching vocal music to classes is an advanced art. Each individual pupil must be instructed and trained and each must be enlisted in the study of music. Concert work

even in music has its limits. Each pupil needs special attention. Vocal music must be taught as thoroughly as mathematics. The excellent manuals for teachers of vocal music are certainly of great value, but the teacher needs to get inspiration and methods from living artists.

EFFICIENT METHODS IN TEACHING DRAWING AND WRITING.

Man-mental culture develops intellect and emotion and will through hand training. It includes as school arts drawing, writing, and making. Form study and drawing complement each other. All art involves drawing. Drawing is a universal language, and its applications are manifold. The modern teacher is skilful in blackboard drawing. Agassiz, as he lectured, seemed to make the germ grow from the egg to the fully developed bird. Whatever the subject, drawing re-enforces good teaching. Inability to draw cripples the most gifted of teachers. "Oh, that some wise teacher had taught me to draw!" is the sad refrain of many a learned professor.

1. *Educative Value.* Drawing is the key to the world of manual art. It brings into the lives of our pupils something of painting, sculpture, architecture, landscaping. Literature, music, drawing—these are studies that develop taste and imagination. The drawing lessons awaken interest, and when well conducted educate æsthetic feeling, develop intellect, and cultivate will. Drawing aids pupils in all other studies. The practical value of drawing is incalculable. It is

not surprising, therefore, that drawing has worked its way to a permanent place in all modern schools.

2. *Preparation for teaching Drawing.* The coming teacher will be cultured and skilled in drawing. It is not meant that teachers will even attempt high art, but they must be prepared to lead their pupils to appreciate art creations; they must be prepared to conduct the drawing lesson as intelligently as they conduct the geography lesson; they must be prepared to draw rapidly and reasonably well on the blackboard. All teachers in our primary and ungraded schools must be prepared to teach drawing. Drawing in the near future will be taught by specialists in our intermediate schools as in our high schools and normal schools.

3. *Drawing Manuals.* However skilled teachers may be, they will need to consult constantly the best manuals. These manuals embody the best thought and experience of experts, and are rich in helpful suggestions. Prang's Form Study and Drawing Manuals are considered excellent. The Prang Educational Company, of Boston, have done much to promote art education. Teachers will get suggestions from manuals and from living teachers, and will then create their own ideals and pursue their own plans.

4. *Course in Drawing.* Drawing is begun in the kindergarten and is continued in some form through the school and college years. Two drawing lessons a week in elementary schools and one lesson a week in high schools and colleges will suffice for the many. These lessons are supplemented by the applied drawing in nearly all subjects. Excluding drawing from

high-school and college courses is considered a fundamental educational mistake. The suitable weekly lesson keeps students in touch with the art world.

5. *Writing.* The tendency is to the use of the vertical system of writing and to greatly shorten the time usually devoted to teaching writing. During the primary years it is found satisfactory to have the writing and the drawing lessons on alternate days. Later the necessary training in writing is given in connection with drawing.

Fine penmanship is not a school art; speed and legibility are the aims. Children learn to write as they learn to read, and writing and reading go on together. Teachers should look well to positions and movements, and manage to get pupils to write plainly and rapidly.

The vertical writing in some modified form will, it is believed, be the writing of the future. Teachers will learn to so teach writing as to economize energy and make this art of greatest value in all school work and in life. Suggestive manuals will aid in the work.

EFFICIENT METHODS IN MANUAL TRAINING.

“Making” best expresses the manual-training idea. Form study, drawing, and manual training are supplementary. To some extent manual training, the newest of all our school studies, is beginning to be continuous through the school and college years. How to make manual training in its most helpful forms general is one of the educational problems of our times. The little kindergartners mould and weave and cut and paste. Our best primary schools continue the

manual-training work of the kindergarten and adapt it to the grades. As we transform our graded grammar schools into specialized intermediate schools we will make the solution easy for this class of schools. Art specialists will command the necessary facilities and appliances for efficient work in the art studies.

In some of our high schools the manual training is becoming excellent. Some of our normal schools include in their art work excellent courses in manual training. Our ungraded schools and our unspecialized grammar schools are still, as a rule, without manual training. Satisfactory plans for efficient manual training in these schools have not yet been devised. Some teachers, however, are succeeding, and that all may succeed is no longer doubted; but we must not attempt too much nor expect too much. We must study the conditions and gradually introduce the lines of manual training most fitting.

EFFICIENT METHODS OF TEACHING.

SUGGESTIVE STUDY HINTS AND TOPICS FOR DISCUSSION.

Good Teaching in lieu of Extraneous Incentives.—Read again pp. 177-195. Why do you contend that vital teaching is the very essence of helpful school work? Discuss the questions: "Should written recitations take the place of formal written examinations?" "Should good teaching banish per-cent marking?" "Should educative records and reports displace per-cent drudgery?" "Should good teaching lead to promotion and graduation?" "Why should oral and book teaching be made complementary?" Does the investigation method of studying and teaching include all methods?

XXVI. Efficient Methods in Conduct Teaching.—Discuss, "Is conduct the greatest thing in education?" What are the char-

acteristics of the conduct group of studies? Follow the five lines of conduct work through the schools and the college. Discuss, "Is the conduct group of studies of the highest educative value?" Give your method of teaching the special conduct lessons. Why is educative school government considered the best conduct work? Discuss primary methods in history; intermediate methods; high-school methods; college methods. How will you teach civics in primary classes? in intermediate classes? in high-school classes? Discuss, "How should mind lessons be taught in primary classes? in intermediate classes? in high-school classes?" How may practical religion be efficiently taught in all our schools? Why must ethical culture be ingrained? What lessons do we learn from the Jews? from the Scotch? from the Quakers? from moral heroes? Discuss, "Is duty the keynote to ethical culture?" Mention the three books you consider most helpful in conduct culture. Give some benefits of a good working library in conduct teaching.

XXVII. Efficient Methods in Language-Literature Teaching.—Show that the four lines of language-literature work are organically one. Trace these lines through the schools and the college. Discuss, "Is it best to give this group of studies double the recitation time of the other study groups?" Describe your ideal special programme for language-literature work in the primary; in the intermediate; in the high school. Give some of the advantages of specialization in teaching this group of studies in intermediate schools. Discuss the importance of the working library in teaching English. Point out some of the correlations of literature and other studies. Discuss, "Should reading be made a special study?" Give your method in teaching primary reading. Describe the first step; second step; third step. Describe the A-B-C method; phonetic method; word method; sentence method; look-and-say method; rational method. Why should lessons in expression be continuous? Point out the educative value of literature. Why should language and literature be interlaced? State the evils of divorcing these studies. Point out the blunder in teaching the history of literature rather than literature; in following the old classical ideal. Give your plan for teaching literature in the primary; in the intermediate; in the high school. What do the language lessons include? Give your method in primary language lessons. How should composition be taught in the primary? in the intermediate? in the high school?

XXVIII. Efficient Methods in Science Teaching.—Discuss, "We should teach science rather than sciences." Are the science studies organically one branch? Follow the three lines of Nature study through the schools and the college. Describe your special spiral programme for Nature work: describe Prof. Jackman's; describe Prof. Howe's. What is meant by making geography central in the elementary science group? Mention three helpful manuals for geography teaching. Give your method in primary geography; in intermediate geography. What is your estimate of the educative value of biology? Relate the history of biology in our schools. Why should the preparation for teaching biology be thorough? Give some of the correlations of biology and other studies. Outline your method of teaching biology in the primary; in the intermediate; in the high school. How should we teach physiology and hygiene in elementary schools? State educative value of physics. Give reasons for teaching physics side by side with the other lines of Nature study. Give your plan for teaching physics in the primary; in the intermediate; in the high school. Show that good science teaching enables pupils to accomplish more in their other studies. Visit and contrast schools in which science is and is not well taught.

XXIX. Efficient Methods in Mathematics.—Compare the culture value of mathematics and language; the knowledge value of mathematics and Nature studies. Trace through the schools and the college the two lines of mathematical work. Give some reasons why these lines of study should be continuous; should be interlaced. Compare the special programme of the author and your ideal programme for the mathematics studies. Why does the wise teacher welcome excellent manuals of methods? Are working libraries important in mathematics work? Discuss each of the five lines of preparation for teaching mathematics. Tell the story of methods of teaching arithmetic. Give an outline of the arithmetic work in elementary schools. Discuss "Psychology of Number." Prove that psychology determines methods. Examine method of symbols; method of things; method of thought. Describe methods in arithmetic during the first and second years; during the third and fourth years; during the fifth and sixth years; during the seventh and eighth years. Discuss the characteristics of the ideal text-book in arithmetic. Show the correlations of arithmetic. Give your reasons for placing introductory

algebra in the seventh and eighth grades. Discuss the question, "Should concrete geometry be taught in elementary schools?" Show the correlations of concrete geometry and other studies.

XXX. Efficient Methods in the Art Studies.—Describe the three lines of art study in our schools and colleges. Show that the school arts are organically one branch of study. State the advantages of specialized intermediate and high schools in teaching the school arts. Discuss the preparation of the teacher for teaching the art group of studies. How much time should be given to the art studies in elementary schools? in high schools? in colleges? State some of the hygienic conditions of physical culture. Why are hygienic habits so important? What do you mean by fatigue? by rest? by growth? by normal and abnormal fatigue? by drudgery? Why are vicarious, brutalizing, and excessive school exercises objectionable? Compare the ideals of various peoples as to physical culture. Give reasons for adapted exercises: for free exercises; for spontaneity. What systematic home exercises can you recommend? Discuss the four pledges. Discuss habitual work as exercise. How do you account for the marvelous interest now manifested in physical culture? Give six reasons why vocal music should be taught in our schools and colleges. What can you say about the culture value of music? about preparation for teaching music? about class methods in teaching music? Discuss the culture value of drawing; the practical value; the value to the teacher. Prove that manual training should have a place in all our schools. Review *Manual of Manu-mental Culture*, by R. K. Priz, American Book Company.

Manuals of Method.—The following are some of the helpful general manuals:

De Garmo's *Essentials of Method*. D. C. Heath & Co., Boston.

McMurry's *General Method*. Public School Publishing Company, Bloomington, Ill.

Brook's *Normal Methods*. Sower & Co., Philadelphia.

Parker's *Concentration*. E. L. Kellogg & Co., New York.

Johonnot's *Principles and Practice of Teaching*. D. Appleton & Co., New York.

Greenwood's *Principles of Education practically Applied*. D. Appleton & Co., New York.

Garlick's *Manual of Method*. Longmans & Co., New York.

SYLLABUS OF BALDWIN'S SCHOOL MANAGEMENT AND SCHOOL METHODS.

Pages 3 to 54.

I. PUPIL BETTERMENT THROUGH BETTER EDUCATIONAL CONDITIONS.

1. *Discuss* "Does progress come of ideals in advance of reals?"
2. Show that pupil betterment is the central idea in school management and school methods.
3. Describe your ideal school; your ideal teacher; your ideal pupil; your ideal school board.
4. *Discuss* "Is pupil study the most important thing in the new education?"
5. Explain how pupil study helps teachers; how it works pupil good.
6. Give the author's plan for pupil study; the plan of Prof. Earl Barnes; of President Hall; your plan.
7. What is the infant? the child? the boy? the youth? the young man?
8. Point out the gains from studying the pupil as a physical being; as a self; as a moral agent.
9. As an educator, what does the teacher do for the pupil? Illustrate.
10. *Discuss* "Is teaching a learned profession?" "May teaching be made a learned profession?"
11. Why must the ideal teacher be gifted? cultured? prepared? devoted? progressive?

12. *Discuss "Should schools for educating teachers be sustained?"*
13. *What is meant by school hygiene? by home hygiene? by personal hygiene?*
14. *Discuss "Is the hourly recess a hygienic desideratum? Is it an educational imperative?"*
15. *Show that free exercise as well as systematic exercise is indispensable.*
16. *Explain the sanitary value of pure air; of normal temperature; of proper light; of play*
17. *Describe the civilized toilet; the sanitary cloakroom; the hygienic lunch*
18. *Show the value of regularity; of cleanliness; of abundant sleep; of hygienic diet; of suitable clothing; of cheerfulness; of self-control; of physical vigor.*

Pages 55 to 90.

II. PUPIL BETTERMENT THROUGH BETTER EDUCATIONAL FACILITIES.

1. *What do you mean by educative environments? by school management?*
2. *Describe your ideal school location; school grounds; schoolhouse.*
3. *Tell the story of the evolution of the schoolhouse; describe what you have seen.*
4. *How can we make the best school work possible? how secure physical comfort?*
5. *Describe the teacher's ideal schoolroom outfit; describe desirable schoolroom decorations.*
6. *Give the meaning of school apparatus; the value of; the use of; the care of.*

7. Describe your ideal educative school grounds; schoolroom; blackboard.
8. What apparatus is needed in conduct teaching? in language-literature teaching? in science teaching? in mathematics teaching? in art teaching?
9. Give your views about making, buying, and taking care of apparatus.
10. *Discuss* "Are books the best helps in teaching and in learning?"
11. Review the six characteristics of the ideal text-book. Describe your ideal text-book.
12. *Discuss* "Should text-books be free in our public schools?"
13. Outline the history of school libraries; give your estimate of their value.
14. *Discuss* "Should every schoolroom have a working library?"
15. Describe the working library of a rural school; of a primary school; of an intermediate school; of a high school.
16. How would you manage department libraries in rural schools? in primary schools? in intermediate schools?
17. In what way may general libraries be made most beneficial?
18. *Discuss* "Should school faculties manage the working libraries?"

Pages 91 to 146.

III. PUPIL BETTERMENT THROUGH EDUCATIVE SCHOOL GOVERNMENT.

1. What is meant by teacher-governing power? by the teacher as the vital factor in the school?

2. *Discuss "Is moral worth primary in school government?"*
3. In governing power show the value of character; of culture; of pupil insight; of teaching power; of heart power; of will power; of system; of tact; of bearing.
4. What do you mean by government? by school government? by motives? by incentives?
5. *Discuss "May the teacher determine pupil motives?" "Is the teacher responsible for pupil conduct?"*
6. What is meant by hurtful incentives? by low incentives? by high motives? Illustrate.
7. Explain the three classes of high motives; the three classes of highest motives.
8. *Discuss "Is an ideal school an embryo state?" "Are wise laws fundamental?"*
9. State the educational principles that determine school regulations; illustrate each.
10. Exound the educative school code; illustrate its enactment; explain its educative value.
11. What do you mean by order? by law-abiding? by self-government? Why is self-government best?
12. How will you develop the habit of working quietly? of regularity? of promptitude?
13. How will you educate your pupils to act properly? to do right?
14. *Discuss "Does educative suffering tend to work reformation?" "Is educative punishment remedial?"*
15. Examine the principles relating to school punishments; illustrate each.
16. What are helpful school punishments? Discuss disapproval; reproof; privations; suspension.

17. What are hurtful punishments? Discuss corporal punishment; fear; cruel punishments; unjust punishments; low marks.
18. *Discuss "May rational control be safely substituted for the rod in our schools?"*

Pages 147 to 197.

IV. PUPIL BETTERMENT THROUGH EDUCATIVE CLASS MANAGEMENT.

1. Tell the story of school evolution; of individualism; of classification.
2. Describe the class; its object; its adaptation; size of classes; value of the class.
3. Explain the art of happy class control. *Discuss "Is attention through interest fundamental?"*
4. Give your plan for classifying; for promoting.
5. What do you mean by class work? by the recitation; by good class work? by poor class work?
6. Review the six characteristics of educative class work. Name some other characteristics.
7. Explain class methods; the unity method; the investigation method; the teaching question method; the conversation method; the discussion method; the lecture method.
8. Describe class devices; the class; written work; laboratory work; outline work; reporting; teaching; original devices.
9. What do you mean by school tactics? state the object; the value.
10. Give some determining principles. How does a signal-clock help?

11. Illustrate fitness in calling and dismissing school; in calling and dismissing classes; in recitation tactics; in blackboard tactics; in concert tactics.
12. Contrast the old education and the new as to oral and book work.
13. Compare oral and book teaching in the kindergarten; in the primary; in the intermediate; in the high school; in the college.
14. Describe the oral teaching and the book teaching in our best schools.
15. *Discuss* "Should the written recitation be substituted for the formal examination?"
16. Give seven reasons why good teaching should take the place of all forms of comparative marking.
17. Describe educative records and reports. Why should per-cent records and reports disappear from our schools?
18. *Discuss* "Should good teaching by fostering efficient study determine promotion and graduation?"
19. Why should teachers so manage that the old education will imperceptibly grow into the new, just as the serpent sheds its old skin in growing the new?

Pages 198 to 298.

V. PUPIL BETTERMENT THROUGH BETTER SCHOOL AND COLLEGE
ORGANIZATION AND CORRELATION.

1. Look over the educational highway. What is the central idea in its construction? Why is each line of study progressive and continuous?
2. What does each class of schools stand for? What studies should constitute the school courses?

3. Discuss the five necessary co-ordinate groups of studies; the five practical groups.
4. Give the history of the Report of the Committee of Fifteen; of the Committee of Ten.
5. Describe the programme for elementary schools in the Report of the Committee of Fifteen.
6. Tell the story of the rural schools. Is it true that most of our leaders come from these schools?
7. *Discuss "May the rural schools be made as efficient as the city schools?"*
8. Explain why country schools must be *sui generis*; why are ungraded schools least economical?
9. Picture your ideal rural school site; grounds; schoolhouse; cloakroom; civilized toilet.
10. Why must our rural schools be arranged in organic groups? Is the township system best?
11. Discuss the rural district; school board; district principal; district faculty; district library.
12. Explain the rural-school course of study; the four-group programme; the three-group programme.
13. *Discuss "Should the central rural school gradually evolve into the district high school?"*
14. How must the method of work in rural schools differ from that in the graded schools?
15. Describe the place and work of the kindergarten; the ideal kindergarten; the ideal kindergartner.
16. Give your views of the ideal primary-school house; ideal faculty; ideal library.
17. Examine primary organization; course of study; programme; methods. Why must the first primary grade be made a semi-kindergarten?
18. Explain educational periods; the work of each school group; the stages of school evolution.

19. *Discuss* "Will the spirit of progress compel the transformation of our graded grammar schools into specialized intermediate schools?"
20. Describe the special school-building system; describe your ideal school building for the specialized intermediate school of the future.
21. Examine the intermediate study groups; the intermediate course of study; the specialized intermediate programme.
22. Describe the specialized intermediate school at work.
23. When should specialization begin? Give the view of leading educators.
24. *Discuss* "Will the benefits of intermediate specialization far outweigh its objections?"
25. Give the history of the high school; its place; its functions; its characteristics.
26. Discuss high-school study groups; high-school courses; high-school programmes.
27. Describe the high-school faculty; organization; promotion; graduation.
28. Discuss college correlation; adaptation; methods; early specialization.

Pages 299 to 373.

VI. PUPIL IMPROVEMENT THROUGH EFFICIENT METHODS OF TEACHING.

1. *Discuss* "Should the conduct group of studies take highest rank?" "Should conduct teaching be systematic?"
2. Trace through the schools and the college the five lines of conduct work. Give your special programme for the conduct studies.

3. Give your method in school conduct; in how to study; in manners; in morals.
4. Explain your method in primary history; in intermediate history; in high-school history; in civics; in mind-lessons; in practical religion.
5. Why do you consider history and biography supplemented by literature the great conduct studies?
6. *Discuss* "Is duty the keynote in the practical culture of the moral virtues?"
7. Trace the four lines of language-literature work; show their organic unity.
8. Investigate the special programme for language-literature studies. *Discuss* "Is too much time given to language-literature studies?"
9. Give your method in primary reading; in primary literature; in primary language lessons; in primary composition; in intermediate teaching of these studies in high school.
10. Why do we call the science group of studies Nature studies? Give your estimate of their educative value.
11. Trace through the schools and the college the three lines of Nature study; show the organic unity of the science studies.
12. Discuss special programmes for science work. Is one daily recitation period sufficient?
13. Give your method in primary geography; in intermediate geography; in correlating geography and history.
14. Tell the story of the growth of the study of biology. Why must teachers make special preparation for teaching biology?

15. Give your method in primary biology; in intermediate biology; in correlation of biology and other studies.
16. Review *Nature Studies*, by Prof. Jackman; *Systematic Science Teaching*, by Prof. Howe.
17. Why should the study of physics be continuous? Estimate its educative value.
18. Give your method in primary physics; in intermediate physics; in high-school physics.
19. Show the natural and helpful correlations of physics and other studies.
20. *Discuss* "Does good science teaching lessen interest and efficiency in the other study groups?"
21. Trace through the schools and the college the two lines of mathematics work. Tell the educative value of these studies.
22. Criticise the special programme for mathematics studies. Is the time adequate?
23. Give the five items of preparation for teaching mathematics; point out the danger from presumption.
24. What distinction do you make between pure and applied arithmetic? Give six characteristics of the ideal text-book in arithmetic.
25. In primary arithmetic illustrate the method of symbols; the method of things; the method of thought.
26. Give your method in primary arithmetic; in advanced arithmetic.
27. How should we teach introductory algebra in seventh and eighth grades?
28. Give your methods in concrete geometry; point out its correlations.

29. Trace through the schools and the college the three lines of art study ; show their organic unity.
30. Study the special programme for art work. What changes would you make ?
31. What special preparations are necessary for teaching the school arts ?
32. What is our ideal in physical culture ? Why do you object to exercises that are vicarious, brutalizing, violent, inferior ?
33. Show that school exercises should be adapted ; systematic ; interesting ; educative.
34. Explain the four pledges for home exercises. Why should exercise be habitual ?
35. Estimate the educational value of music. Explain your method in primary music ; in intermediate music.
36. Give your method in primary drawing ; in intermediate drawing ; in primary writing. Do you prefer vertical writing ?
37. Estimate the value of drawing to the teacher ; to the pupil ; in life.
38. *Discuss "Should manual training be continuous through the schools ?"*
39. Describe manual training in the kindergarten ; in the primary ; in the intermediate ; in the high school.
40. What is your plan for getting manual training into all our schools ?

INDEX.

Abnormal fatigue, 41, 357, 358, 360.
Adapted school exercises, 42, 361, 363.
Adopting regulations, 116.
Æsthetic culture, 59, 68, 360.
Aids in geography, 72, 334.
Alertness, ix, 180.
Algebra, 200, 288, 280, 352.
Alphabetical method, 325.
Apparatus, Chap. VII; importance of, 69; school grounds, 70; schoolroom, 70; blackboard, 71; in conduct, 71; in language-literature, 72; in science, 330; in mathematics, 73, 351; in art, 74, 361, 367, 369; laboratory, 169, 339.
Appliances, betterment of, Chap. VI; hygienic, 64; movements, 64; electric programme clock, 65; physical comfort, 65; schoolroom outfit, 65; school apparatus, 69; library, 81.
Architecture, educative, 61, 69; union school system, 258; special system, 259; hygienic, vii, ix.
Arithmetical correlations, 351.
Arithmetic, methods in, 345.
Art of teaching, xi, xv, 10, 26, 36, 163, 319, 353, 368.
Art programme, 354.
Art studies, good facilities, 74; courses in, 352; useful and beau-

tiful, 210; special teacher, 268; art methods, Chap. XXX; courses in, 353.
Artistic teaching, xi, 36, 154, 164, 172, 181, 368.
Attention, 154, 160, 185.
Bacon, 6.
Barnes, Earl, methods of studying children, 24.
Benefits of specialization, 259, 270, 277.
Betz, Carl, Graded Gymnastics, 362.
Biography, 207, 308, 306.
Biology methods, 335.
Blackboard, construction, 70; use, 71; tactics, 175.
Books, best help, 75; educate, 81; educative, Chap. VIII; new education, 177; manuals, 306, 334, 343.
Brooks, Edward, Normal Methods, 373.
Brutalizing exercises, 359.
Butler, Nicholas Murray, pupil study, 14.
Cathletics, vii, 40, 42, 363.
Career of teaching inviting, 29.
Carlyle, 81.
Central idea, xi, 4, 12, 202.
Central school, 223, 239.
Chair of pedagogy, 34, 293.

Cheerfulness, 51, 97.

Child study, value, 14; childhood, 16; child friend, 17.

Circles for pupil study, child, 17; boy and girl, 20; youth, 20.

Civics, ix, 310.

Class advantages, ix, 152.

Class management, class, 151; control, 154; classification, 157; class work, 159; efficient, ix; methods, 162; class devices, 168; class tactics, 172.

Class methods, Chap. XVI; recitation, 158; criticism, ix.

Class work, hygienic conditions, 158; control, 154; characteristics, 159; methods, ix, 162; devices, 168.

Classification, evolution, 150; the class, 151; criteria, 157; advantages of, 158; of ungraded schools, 227; four-group plan, 227; three-group plan, 234.

Classifying, rural schools, 158, and Chap. XXXI; primary schools, 158, and Chap. XXII; intermediate schools, 156, and Chap. XXIII; high school, 156, and Chap. XXIV.

Cleanliness, schoolroom, 46; closets, 47; personal, 50.

Code, school, 114, 117, Chap. XIII.

Coeducation, 290.

College methods, 287, 309.

Colleges, courses of study, 200, 217; options, 210; small colleges, 292; connection with high school, 288; trained professors, 289; faculty a teaching unit, 290.

Composition, 320, 329.

Concentration, xv, 257, 323.

Concrete geometry, 78, 352.

Conduct culture, Chap. XXVI; conduct studies, 301; school conduct, 303; history and conduct, 306; civics, 310; mind lessons and conduct, 311; religion and conduct, 314; greatest, xiv, 208.

Conduct programme, 302.

Conduct specialists, 208, 260, 301.

Conduct studies, helpful appliances, 71; courses in, 200; greatest thing, 208; rural schools, 229; conduct methods, Chap. XXVI.

Conscience, 127.

Conversation method, 165.

Co-ordinate study groups, necessary, 205; practical, 207; in school and college, 200.

Co-ordination and correlation of educational institutions, Dr. Magill, 294; educational highway, 200, 253.

Corporal punishment, viii, xii, 123, 140, 144.

Correlation of schools and courses, xiv, Chap. XX; Report of Fifteen, 211, 212; of studies, 200, 213; of intermediate work, 269; of conduct studies, 308; of literature, 321, 329; of arithmetic, 351; geography, 333; of biology, 337; of physics, 340; of mathematics, 341; of art, 351.

Courses of study, general, 200; elementary schools, 212; high school, 215, 288; college, 217, 288; rural schools, 230.

Criticism, ix.

Culture, conduct, Chap. XXVI; physical, Chap. XXX; ethical, 315; aesthetical, 365, 367.

Cycling, 364.

De Garmo, C., *Essentials of Method*, 373.

Departments of education, 38.

Desks, single and adjustable, 48.

Devices, the class, 168; laboratory work, 169; outline work, 170; reporting work, 170; original, 171; hurtful, 359.

Dewey, John, *Psychology of Number*, 346.

Diagrams, the school, 2; educative conditions, 87; educative facilities, 56; school government, 92; educative incentives, 107; governing power, 95; educative class management, 148; oral and book work, 178; correlation of schools and courses, 200; methods of teaching, 300.

Discussion method, 168.

District school board, 222.

Divine commission, 98.

Drawing, 182, 367.

Drill, 162.

Drudgery, 358.

Duty, 127, 130, 318.

Early specialization, 293.

Education, definition of, 201.

Educational highway, 202, 253.

Educational periods, 253.

Educational press, xv, 355, 365.

Educative class work, 153.

Educative motives, 108, 107.

Educative school government, viii, xiii, 98, 108, 112, 119, 232.

Efficient methods, conduct teaching, 301; language-literature teaching, 319; science teaching, 330; mathematics teaching, 341; art teaching, 353.

Elementary schools, place, 211; course of study, 212, 280.

Embryo republic, the school, 112.

Enforcement of regulations, 119, 121, 122, 124, 126, 128.

Environments, 57, 58, 63.

Ethical culture, 315; historic, 316; ethical environments, 58, 317; ethical habits, 318; ethical conscience, 127, 130, 318.

Evolution of school, 149; of class, 150; of intermediate school, 254; of high school, 277.

Examinations, hurtful, 185; pernicious, 180; wasteful, 180; uneducative, 187; replaced by written recitation, 188.

Excessive exercises, 360.

Exercise, 40, 356, 361, 363.

Faculty, rural school, 237; primary, 245; intermediate, 260; high-school, 266; college, 280.

Faculty work, 238, 246, 266, 269, 287.

Fatigue, 357.

Four-group programme, 227, 234.

Free exercises, 362.

Frye, F. A., *Methods and Aids in Geography*, 334.

Garlick, A. H., *Manual of Methods*, 310.

General libraries, 88.

Geography, apparatus, 72; methods, 388; how to teach, 384.

Geometry, 73, 352.

Germany, oral teaching, 79.

Good teaching, best incentive, Chap. XIX; written examinations, 185; per-cent marking, 189; educative records, 191; promotion, 194; high incentives, 189; all-sufficient, 190; ultimate, 191; comparative marking, 191.

Governing power, elements of, 93; character, 94; culture, 95; pupil insight, 96; teaching power, 96; heart power, 97; will power, 98; system, 99; tact, 101; hearing, 102.

Government, educative, vii, viii, xiii, 9, 108, 112, 119, 129.

Grading, 255, 264.
 Graduation, 194.
 Greenwood, J. M., history of mathematics, 343; arithmetic, 347; practical methods, 362.
 Grounds, school, sanitary, 59; aesthetic, 59; educative, 70.
 Grouping rural schools, 227, 234.
 Groups of schools, unique, 254.
 Groups of studies, map of, 200, 280; conduct group, 300; language-literature group, 320; science group, 321; mathematics group, 341; art group, 353.
 Growth, 7, 9, 10, 36, 57, 98, 358.
 Gymnastics, systematic, vii, 42, 293, 352, 363.

Habits, regularity, 49; cleanliness, 50; sleep, 50; clothing, 51; cheerfulness, 51; law-abiding, 52, 128.
 Hall, G. Stanley, pupil study, 14; Methods of Teaching History, 310.
 Happy class control, 154.
 Harris, W. T., editor's preface, v; text-books, 75; use of, 80; the rod, 141; study groups, 204; reading, 323.
 Health, condition of, 28; through law-abiding, 38; conditions happiness, 52; culture of, 356.
 Heart power, 97, 184.
 Heating, normal temperature, 45.
 Help, school, 8, 57, 69, 76, 81.
 Heredity, evolution of, 16.
 High educational ideals, Chap. I.
 High motives, self-betterment, 108; altruistic, 108; incentives of the true, beautiful, and good, 109.
 High-school education, Supt. Sordan, 288; study groups, 280.
 High school, improvement of, Chap. XXIV; place, 214, 274; function, 214; course of study, 215, 282; report of the Committee of Ten, 214; prepares for life, 274; prepares for college, 275; history of, 275; building, 277; programme, 255; faculty, 286.
 High-school libraries, 85, 88.
 High-school methods, in history, 309; in psychology, 313; in literature, 324.
 Hindale, B. A., How to Study and Teach History, 310; bad methods in literature, 327; Teaching the Language Arts, 329.
 History, 207, 208, 306.
 History of the country school, 218.
 Home exercises, 363.
 Home hygiene, parental co-operation, 89, 364.
 Howe, E. G., Systematic Science Teaching, 332.
 How to train pupils to study, ix, 162, 303.
 Hurtful devices, 168, 359.
 Hurtful motives, 105, 180.
 Hygiene, school, Chap. IV; health, 38; neglect of, 39; home hygiene, 39; play, 40; gymnastics, 42; hourly recess, 41; lunch, 42; ventilation, 42; heating, 44; lighting, 45; cleanliness, 46; toilet, 47; desk, 48; habits, 49.
 Hygienic conditions, of class work, 158; of physical culture, vi, 356.
 Hygienic habits, 49, 356.

Ideals, in advance of reals, xii, 3; realization, 5, 10; school ideals, 6; higher teacher ideals, 7; popular, ii; ideal scheme, 295; ideal text-book, 75, 349.
 Incentives, educative, Chap. IX; extraneous, Chap. XIX.
 Individual method, 168.
 Individualism, ix, 149, 264.

Infant study, Jesus, 14; real child, 15; infancy, 16; baby friend, 16.

Injudicious punishments, unjust, 143; degrading, 143; fear, 143; corporal, 140, 144.

Inorganic nature, x, 206, 331.

Interest, 154, 185, 190.

Intermediate librarians, 84, 87.

Intermediate methods in history, 308; in civics, 311; in mind lessons, 312; in language, 329.

Intermediate schools, improvement, Chap. XXIV; ideal, 265; boy-and-girl stage of growth, 266; specialization, 267; faculty, 267; ideal buildings, 268; course of study, 268; programme, 265; benefits of specialization, xv, 270, 285.

Interrelation of studies, 269.

Introductory algebra, 359.

Investigation, 164.

Jahonnot, James, *Principles and Practice of Teaching*, 373.

Journals, school, xv, 355, 365.

Journal of the N. E. A., xv.

Judicious punishments, 129, 133, 137, 141.

Kindergarten, place, 212; apparatus, 234; kindergarten, 210, literature, 240; training, 240; pictures, 234.

King, E. F., methods in geography, 364.

Laboratory work, 27, 104, 211.

Languagé, Formalized Physiology of Bodily Exercise, 7.

Lantion, Joseph, *Class Management*, xxvi.

Language literature methods, Chap. XXVII, group of studies, 322.

special programme, 320; organic unity, 321; methods in reading, 322; in literature, 327; in composition, 329; programme, 320.

Literature - literature studies, suitable help, 71; courses in, 200; second place, 209; special teacher, 267; four lines, 320.

Law-abiding, self-control, Chap. XIII; educate to work quietly, 119; educate to regularity, 121; educate to promptitude, 125; educate to proper conduct, 125; educate to right conduct, 127; methods, Chap. XXVI.

Laws, school regulations, 118; educative, 118; positive, 118; few, 118; practical, 114; popular, 114.

Length of recitation, 213, 281.

Lesson, plan, 161; oral, 180; book, 182.

Libraries, school, Chap. IX; classifications, 82; management, 82; working, 82; rural, 82; primary, 84; intermediate, 84; high-school, 86; department, general, 86.

Lighting, perfect, 46; windows, 46; injury to eyes, vi, 46, 64.

Literature, x, 206, 327.

Location, school, moral environment, 58; commodious grounds, 58; sanitary, 58; aesthetic, 59; educative, 60.

McLellan, J. A., *Psychology of Number*, teaching arithmetic, 346.

McMurry's General Method, 373.

Mayo, F. H., *Principles and Practice of Education*, 1.

"correlation of educational institutions," 126.

Management, vital, 9; definition, 11; 12, 13, 27, 112.

Manhood study, young manhood,

20; student study circle, 20; biography and sociology, 21.

Manual training, 216, 371.

Manuals, in conduct, 306; in language-literature, 322; in science, 332; in mathematics, 348; in art, 362, 366, 368, 370; of method, 373.

Mental culture, 353, 367, 369.

Mathematics studies, best aids, 73; courses in, 200; form and number, 210; special teacher, 268; methods in, Chap. XXIX; programme, 342.

Men as well as women teachers, 271, 287.

Methods, in rural schools, 240; in conduct teaching, 301; in teaching history, 306; in teaching mind lessons, 311; in teaching practical religion, 314; in culture of moral virtues, 315; in language, Chap. XXVII; in science, Chap. XXVIII; in mathematics, Chap. XXIX; in art, Chap. XXX.

Military exercises, 360.

Mind lessons, 311.

Moral character, 94, 127, 278, 315.

Morbid fatigue, 359, 360.

Motives, educative, Chap. XI; incentives, 108; teacher determines, 104; help or hurt, 104; school incentives, 105; hurtful, 115; law, 106; high, 108; what motives, 111.

Music, 365.

Nature studies, 332.

Necessary study groups, x, 205; inorganic nature, 206; organic, 206; literature, 206; language, 207; history, 207.

New education, 8, 98, 159, 241.

Normal fatigue and rest, 358, 360.

Objectionable exercises, 359.

Objective work, 181, 351.

Observation, 180, 339.

Old education, 96, 142, 150, 177.

Oral teaching, oral instruction, 76; oral and book teaching, 79.

Oral work, Chap. XVIII; oral and book work, 178; oral teaching, 180; oral methods, 305.

Order, fitness, 119.

Organic nature, x, 206.

Organic unity of schools and courses, 201; part and whole, 202; stages of growth, 203; organic unity of faculties, xiii, 266.

Organization, school improvement, 8; rural school, 221; school district, 221; school board, 222; principal, 222; of primary schools, 247; of intermediate, 261; of high school, 277.

Our ideal manhood, 361.

Outdoor school exercises, 40, 362.

Parker, Francis W., value of child study, 14; per-cent marking, 189; How to Study and Teach Geography, 334; concentration, xv.

Per-cent marking, criminal, Parker, 189; outrage, Tompkins, 189; an idol, White, 189; low motive, 189; extraneous incentive, 192; vicious, 190; monster robber, 191; comparative marking vicious, 191.

Physical culture, vii, 293, 353, 356, 359, 361, 365.

Physics, methods in, 268, 338.

Physiology of exercise, 357.

Plato, 243.

Play, vii, 40, 242.

Pledges, 363.

Practical suggestions, apparatus, 74; punishments, 144.

Practical work, 351, 353.
 Prang's Form Study and Drawing, 368.
 Prepared teachers, 7, 12, 26, 93, 176, 386, 343.
 Preparation for teaching, 80, 85, 289, 301, 322, 336, 343, 354.
 Primary, ideal schoolhouse, 244; faculty, 245; organization, 247; course of study, 259; programme, 252; methods, 243.
 Primary libraries, 83, 87, 245.
 Primary methods in history, 307; in reading, 323; in mathematics, 347; in geography, 383.
 Prince, J. F., German methods, 79.
 Principal, primary, 245; intermediate, 260; high-school, 286.
 Privation, 121, 123, 128, 136.
 Professional schools, departments of education, 38; chairs of pedagogy, 84; normal schools, 84; summer normals, 35; circles, xv.
 Profession of teaching, advancement, 27, 36.
 Programme clock, 65, 173.
 Programme, for ungraded schools, 233, 236; primary, 252; intermediate, 265; high-school, 285.
 Programme, in conduct, 302; in language-literature, 320; in science, 331; in mathematics, 341; in art, 354.
 Progress, through ideals, 8, 161; pupil alertness, ix.
 Promotion, 157, 194, 218, 248, 261.
 Promptitude, importance, 115; law, 123; example, 123; incentives, 124.
 Proper conduct, importance, 115; law, 125; example, 125; motives, 125; training, 125; remedies, 126.
 Provinces of study, XII, 205, 331.
 Psychology, 18, 23, 96, 311, 312.

Punishment, educative, viii, Chap. XIV; moral necessity, 128; remedial, 129; use of suffering, 180; principles determining, 130; educative, 131; reformatory, 131; natural, 132; just, 182; helpful, 183; disapproval, 133; reproof, 134; privation, 136; suspension, 137; corporal, 140; fear, 142; degrading, 143; unjust, 144.
 Pupil betterment central idea, 4; through educative management, 14.
 Pupil study, greatest thing, 6; Chap. II; neglect of, 18; value to teacher, 14; physical economy, 21; mental economy, 23; self-knowledge, 23; methods of, 24; Barnes, Parker, Hall, 24; insight, 96.

Quiet work, important, 114; conditions of, 119; example, 120; altruistic incentives, 120; training, 120.

Recesses, vii.
 Recitation, class work, 158; characteristics, 159; methods, 162; devices, 168; tactics, 172; periods, 218; time, 218; management, ix.
 Recitation periods, elementary schools, 218; rural schools, 281; primary schools, 244.
 Record and reports, educative, 191; attendance, conduct, class standing, 192; reports, 198.
 Recreation, 40, 362.
 Reform, Bacon's rule, 6; perennial, 6.
 Regularity, importance, 122; incentives, 122; enforcement, 123.
 Regulations, educative, Chap. XII; guiding principles, 118; school code, 114; adoption of, 116; enforcement of, Chap. XIII.

Religion, methods of teaching, 314.
 Report of the Committee of Fifteen, correlation, 211.
 Report of the Committee of Ten, secondary schools, 214.
 Reproof, 184.
 Rest, 358, 362.
 Review, 160.
 Right conduct, importance, 115; law, 127; example, 127; moral teaching, 127; training, 128; punishment, 128.
 Rowing, 365.
 Rural libraries, 83, 86, 224.
 Rural schools, efficient, Chap. XXI; story of, 218; *sui generis*, 219; ungraded, 219; school grounds, 220; schoolhouse, 220; organization, 221; library, 224; advantages, 226; disadvantages, 226; course of study, 230; programme, 233; faculty, 237; methods, 240.
 Salaries, generous, 28.
 School arts, 358.
 School district, 221.
 School essentials and school helps (diagrams), 2.
 School evolution, 5, 254.
 School government, Part III; practical, vii, viii; rational, xi.
 School grounds, 60, 220.
 Schoolhouse, central, 60; evolution of, 61; ideal, 62, 220; primary, 244; intermediate, 255; high-school, 277.
 School hygiene, Chap. IV; in class control, 154; in school work, 8; in school government, 119.
 School organism, a unit, 4; organic growth, 4; evolution, 5; ideal, 6.
 School tactics, 172.
 Science studies, teaching, Chap. XXVIII; science apparatus, 72; courses in, 200; inorganic and organic Nature, 209; special teacher, 268; lines of work, 331; programme, 332; methods in, 330.
 Scott, C. B., Nature Study, 332.
 Secondary schools, place, 214; course of study, 215, 282; report of the Committee of Ten, 214.
 Shaw, E. R., Physics by Experiment, 339.
 Signals, 65, 172, 173.
 Sheldon, E. A., ceaseless progress, 83.
 Size of classes, 152.
 Special conduct lessons, 302.
 Special programme for conduct, 302; for language-literature, 320; for science, 332; for mathematics, 342; for art, 352.
 Special teacher, 265.
 Specialization, xiv, 253, 257; Chap. XXIII, 293.
 Specialization, cardinal, 28.
 Spontaneity, in recitation, 159; in gymnastics, 362.
 Study groups of the rural schools, 229; primary schools, 249; intermediate, 262; high school, 280; college, 200.
 Study hints, educational conditions; 53; school facilities, 89; school government, 145; class management, 196; school and college correlation, 295; methods of teaching, 370.
 Suspension, 187, 141.
 System, 99; element, 100.
 Systematic Science Teaching, E. G. Howe, 332.
 Systematical Physical Culture, 42, 293, 381.
 Tact, governing element, 101.
 Tactics, school and class, Chap. XVII.

Tarbell, H. S., primary geography, 384.

Tardiness, 115, 124.

Teacher circles, xv, 16, 17, 18, 19, 20.

Teacher betterment through professional preparation, Chap. III.

Teacher, vital factor, 6; the ideal, 12; improvement of, Chap. III; gifted, 30; culture, 31; prepared, 31; devoted, 32; progressive, 33.

Teaching, a profession, 27; permanency, 27; salaries, 28; specialization, 28; career, 29; learned profession, 30; defined, 201; art of, 353; skill, 368.

Teaching mathematics, 343.

Teaching power, 98, 103, 154, 180, 185.

Teaching question, 164.

Testing the senses, 22.

Text-book, ideal, Chap. VIII; boat help, 75; use, 75; characteristics, 76; book teaching, 76, 79; free, 80; arithmetic, 369.

Tompkins, school management, xiv; Tompkins, Arnold, 189.

Topics for discussion, educational conditions, 58; school facilities, 89; school government, 145; class management, 196; school and college correlation, 295; methods of teaching, 370.

Training, 120, 124, 125, 128, 357.

Ungraded schools, Chap. XXI; uneconomical, 388.

Unity, method, 163.

University, characteristics, 292; undergraduates, 292; course system, 298; early specialization, 298.

Unrelated knowledge, 280.

Ventilation, injudicious, vii; perfect, 42; neglect of, 43; pure air, 43.

Vicarious exercise, 359.

Vocal music, 365.

Walking, 364.

White, E. E., per-cent marking, 189; three-group programme, 236; school management, xv; manual of primary arithmetic, 347.

Will power, 98.

Windows of the soul, x.

Working, 364.

Working libraries, rural, 83, 225; primary, 84; intermediate, 84; high-school, 85.

Writing, 370.

Written recitations in lieu of examinations, 185; educative, 185.

Youth, 276.

Youth study, what is the youth, 19; literature, 25.

(1)

D. APPLETON AND COMPANY'S PUBLICATIONS.

JAMES SULLY'S WORKS.

STUDIES OF CHILDHOOD. 8vo. Cloth, \$2.50.

An ideal popular scientific book. These studies proceed on sound scientific lines in accounting for the most interesting testimonies of childhood, yet they require but slender to follow no laborious train of reasoning, and the reader who is not in a mood of entertainment merely will find it in the quaint sayings and doings with which the volume abounds.

CHILDREN'S WAYS. Being Selections from the Author's "Studies of Childhood," and some additional matter. 12mo. Cloth, \$1.50.

This work is mainly a condensation of the author's previous book, "Studies of Childhood," but considerably new matter is added. The fact is that Mr. Sully supplies the most valuable of recent contributions on the psychological phases of child study.

TEACHER'S HAND BOOK OF PSYCHOLOGY. On the Basis of "Outlines of Psychology." Abridged by the Author for the use of Teachers, Schools, Reading Circles, and Students generally. Fourth edition, rewritten and enlarged. 12mo. Cloth, \$1.50.

The present edition has been carefully revised throughout, largely rewritten, and enlarged by about fifty pages. While seeking to preserve the original character of the book as an *introduction*, I have felt necessary, in view of the fact that most of the training colleges for secondary teachers are now making a serious study of psychology, to amplify somewhat and bring up to date the explanations of child psychology. I have also touched upon those recent developments in psychology with which have concerned themselves with the measurement of the simpler mental processes, and which promise to have important educational results by supplying accurate tests of children's abilities."—From the Author's Preface.

OUTLINES OF PSYCHOLOGY, with Special Reference to the Theory of Education. A Text-Book for Colleges. Crown 8vo. Cloth, \$3.00.

ILLUSIONS. A Psychological Study. 12mo, 372 pages. Cloth, \$1.50.

PESSIMISM. A History and a Criticism. Second edition. 8vo, 470 pages and Index. Cloth, \$4.00.

THE HUMAN MIND. A Text-Book of Psychology. Two volumes. 8vo. Cloth, \$5.00.

D. APPLETON AND COMPANY, NEW YORK.

NEW EDITION OF PROFESSOR HUXLEY'S ESSAYS.

Collected Essays.

By THOMAS H. HUXLEY. New complete edition, with revisions, the Essays being grouped according to general subject. In nine volumes, a new Introduction accompanying each volume. 12mo. Cloth, \$1.25 per volume.

Vol.

- I. Methods and Results.
- II. Darwiniana.
- III. Science and Education.
- IV. Science and Hebrew Tradition.
- V. Science and Christian Tradition.
- VI. Hume.
- VII. Man's Place in Nature.
- VIII. Discourses, Biological and Geological.
- IX. Evolution and Ethics, and Other Essays.

"Mr. Huxley has covered a vast variety of topics during the last quarter of a century. It gives one an agreeable surprise to look over the tables of contents and note the immense territory which he has explored. To read these books carefully and studiously is to become thoroughly acquainted with the most advanced thought on a large number of topics."—*New York Herald*.

SPENCER'S MISCELLANEOUS WORKS.

Social Statics.

New and revised edition, including "The Man *versus* The State" A series of essays on political tendencies, heretofore published separately. 12mo, 420 pages. Cloth, \$2.00.

"Mr. Spencer has thoroughly studied the issues which are behind the social and political life of our own time, not exactly those issues which are discussed in Parliament or in Congress, but the principles of all modern government, which are slowly changing in response to the broader industrial and general development of human experience. One will obtain no suggestions out of his book for guiding a political party or carrying a point in controversy, but he will find the principles of sociology, as they pertain to the whole of life, better stated in these pages than in any other where they are expressed anywhere else. It is in this sense that this work is important and fresh and vitalizing. It goes constantly to the foundation of things." *Boston Herald*.

Facts and Comments.

Uniform edition. 12mo. Cloth, \$1.20 net; postage, 12 cents additional.

From the analytical brain of a philosopher of the greatness of Herbert Spencer—a greatness that has extended over more than two generations—the subjects treated in this, his last volume, assume a commanding importance. Such topics as "Anarchism," "Presence of Mind," "The Corruption of Music," "The Origin and Development of Music," "Estimates of Men," "State Education," etc., are invested with a life and actuality only possible under his stimulating treatment.

Various Fragments.

12mo. Cloth, \$1.25.

Along with a considerable variety of other matter, these "Fragments" include a number of replies to critics such among which will be found some of the best specimens of Mr. Spencer's controversial writings, notably his letter to the London *Atomism* on Professor Huxley's famous address at the University of Oxford. His views on copyright, national and international, "Social Evolution and Social Duty," and "Anglo-American Arbitration," also form a part of the contents.

Education: Intellectual, Moral, and Physical.

12mo. Cloth, \$1.25; paper, 50 cents.

CONTENTS. What Knowledge is of most Worth? Intellectual Education—Moral Education—Physical Education.

The Study of Sociology.

(The fifth volume in the International Scientific Series.) 12mo. Cloth, \$1.50.

CONTENTS. Our Need of it. Is there a Social Science? Nature of the Social Science. Difficulties of the Social Science. Our five Difficulties. Subjective Difficulties, Intellectual. Subjective Difficulties, Emotional. The Emotional Bias. The Bias of Patriotism. The Class Bias. The Political Bias. The Intellectual Bias. Discipline. Preparation in Biology. Preparation in Psychology. Conclusion.

D. APPLETON AND COMPANY, NEW YORK.

RECENT BOOKS BY DISTINGUISHED SPECIALISTS.

The Comparative Physiology and Morphology of Animals.

By Prof. JOSEPH LE CONTE. Illustrated. 12mo. Cloth, \$2.00.

Evolution by Atrophy.

By JEAN DEMOOR, JEAN MASSART, and ÉMILE VANDERVELDE. A new volume in the International Scientific Series. 12mo. Cloth, \$1.50.

Foot-Notes to Evolution.

A Series of Popular Addresses on the Evolution of Life. By DAVID STARR JORDAN, Ph. D., President of Leland Stanford Junior University. 12mo. Cloth, \$1.50.

Outlines of the Earth's History.

A Popular Study in Physiography. By Prof. N. S. SHALER, of Harvard University. Illustrated. 12mo. Cloth, \$1.50.

Studies of Good and Evil.

By JOSIAH ROYCE, Professor of the History of Philosophy in Harvard University. 12mo. Cloth, \$1.50.

Evolutional Ethics and Animal Psychology.

By E. P. EVANS, author of "Animal Symbolism in Ecclesiastical Architecture," etc. 12mo. Cloth, \$1.75.

Wages and Capital.

An Examination of the Wages Fund Doctrine. By F. W. TAUSIG, Professor of Political Economy in Harvard University, author of "Tariff History of the United States" and "The Silver Situation in the United States." 12mo. Cloth, \$1.50.

What is Electricity?

By Prof. JOHN TROWBRIDGE, of Harvard University. 12mo. Cloth, \$1.50.

The Psychology of Suggestion.

A Research into the Subconscious Nature of Man and Society. By BORIS SIDIS, M. A., Ph. D., Associate in Psychology at the Pathological Institute of the New York State Hospitals. With an Introduction by Prof. William James, of Harvard University. Illustrated. 12mo. Cloth, \$1.75.

D. APPLETON AND COMPANY, NEW YORK.

PIONEERS OF CREATIVE THOUGHT.

Pioneers of Science in America.

Sketches of their Lives and Scientific Work. Edited and revised by WILLIAM JAY YOUNMANS, M. D. With Portraits. 8vo. Cloth, \$4.00.

"A wonderfully interesting volume. Many a young man will find it fascinating. The compilation of the book is a work well done, well worth the doing." *Philadelphia Press.*

"One of the most valuable contributions to American literature recently made. . . . No better or more inspiring reading could be placed in the hands of an intelligent and aspiring young man"—*New York Christian Work.*

"A valuable handbook for those whose work runs on these same lines, and is likely to prove of lasting interest to those for whom 'les documents humains' are second only to history in importance—nay, are a vital part of history." *Boston Transcript.*

"It is certainly a useful and convenient volume, and readable too, if we judge correctly of the accuracy of the whole by critical examination of those cases in which our own knowledge enables us to form an opinion. . . . In general, it seems to us that the handy volume is specially to be commended for setting in just historical perspective many of the earlier scientists who are neither very generally nor very well known."—*New York Evening Post.*

Pioneers of Evolution, from Thales to Huxley.

By EDWARD CLODD, President of the Folk-Lore Society; Author of "The Story of Creation," "The Story of 'Primitive' Man," etc. With Portraits. 12mo. Cloth, \$1.50.

"Luminous, lucid, orderly, and temperate. Above all, it is entirely free from personal partizanship." *London Academy.*

"A very useful guide to the lives and labors of leading evolutionists of the past and present. Especially serviceable is the account of Mr. Herbert Spencer and his share in rediscovering evolution, and illustrating its relations to the whole field of human knowledge."—*London Literary World.*

"The mass of interesting material which Mr. Clodd has got together and woven into a symmetrical story of the progress from ignorance and theory to knowledge and the intelligent recording of fact is prodigious. . . . An important contribution to a liberal education."—*London Daily Chronicle.*

"We are always glad to meet Mr. Clodd. He is never dull; he is always well informed, and he says what he has to say with clearness and precision. . . . The interest intensifies as Mr. Clodd attempts to show the part really played in the growth of the doctrine of evolution by men like Wallace, Darwin, Huxley, and Spencer. . . . We commend the book to those who want to know what evolution really means."—*London Times.*

D. APPLETON AND COMPANY, NEW YORK.

D. APPLETON AND COMPANY'S PUBLICATIONS.

THE HISTORICAL REFERENCE-BOOK.

Comprising a Chronological Table of Universal History, a Chronological Dictionary of Universal History, a Biographical Dictionary. With Geographical Notes. For the use of Students, Teachers, and Readers. By LOUIS HEILPRIN. Fifth edition, revised to 1898. The Concise Knowledge Library. Uniform with "Natural History" and "Astronomy." Crown 8vo. Half leather, \$2.00.

"Quite the most compact, convenient, accurate, and authoritative work of the kind in the language. It is a happy combination of history, biography, and geography, and should find a place in every family library, as well as at the elbow of every scholar and writer . . . The typography remains ideally good for such a manual."—*New York Evening Post*.

"One of the most complete, compact, and valuable works of reference yet produced."—*Troy Daily Times*.

"An invaluable book of reference, useful alike to the student and the general reader. The arrangement could scarcely be better or more convenient"—*New York Herald*.

"The conspectus of the world's history presented in the first part of the book is as full as the wisest terseness could put within the space"—*Philadelphia American*.

"We miss hardly anything that we should consider desirable, and we have not been able to detect a single mistake or misprint."—*The Nation*.

"So far as we have tested the accuracy of the present work we have found it without flaw."—*Christian Union*.

"The conspicuous merits of the work are condensation and accuracy. These points alone should suffice to give 'The Historical Reference-Book' a place in every public and private library."—*Boston Beacon*.

"The method of the tabulation is admirable for ready reference."—*New York Home Journal*.

A CHRONOLOGICAL TABLE OF UNIVERSAL HISTORY.

Extending from the Earliest Times to the Year 1892. For the use of Students, Teachers, and Readers. By LOUIS HEILPRIN. 12mo, 200 pages. Cloth, \$1.25.

This is one of the three sections comprised in "The Historical Reference-Book," bound separately for convenience of those who may not require the entire volume. Its arrangement is chronological, each paragraph giving, in briefest practicable form, an outline of the principal events of the year designated in the margin.

APPLETONS' CLASSICAL DICTIONARIES.

Appletons' Latin Dictionary (Latin-English and English-Latin). New and Revised edition, 1902.

By J. R. V. MARCHANT, M. A., Oxford, and JOSEPH F. CHARLES, B. A., City of London School. 122d Thousand. 927 pages, 12mo. Cloth, \$1.50.

This is a lexicon of classical Latin. Hence, a large number of archaic and post-Augustan words are omitted. In the edition of 1902 nearly all the important articles have been entirely rewritten, chiefly to introduce a greater number of quotations illustrating construction and usage. The historical and geographical notices have been increased in number and lessened in size, and etymologies have been added. The considerable changes in type and classification will make the work more intelligible and so more useful. A book of the highest practical utility, exceptionally clear and exact.

A Classical Dictionary of Greek and Roman Biography, Mythology, and Geography.

Based on the larger dictionaries by the late Sir WILLIAM SMITH, D. C. L., LL. D. Revised throughout and in part rewritten by G. E. MARINDIN, M. A., Cambridge. With numerous maps and illustrations. 8vo. Half morocco, \$6.00.

The "Classical Dictionary," of which this book is a revision, was designed by the late Sir William Smith for schools, and as a comprehensive reference book. The historical articles include Greek and Latin writers from the earliest times down to the fall of the Western Empire, A. D. 476. The literary articles cover all authors whose works are extant, and all others who influenced literature. In this revision the immense advances in classical philology have been utilized. This applies, particularly to mythology and typography. Many new plans and maps have been inserted. This book is an indispensable companion to the student in reading the Greek and Latin authors.

D. APPLETON AND COMPANY, NEW YORK.

A WORK OF GREAT VALUE.

The International Geography.

By Seventy Authors, including Right Hon. JAMES BRYCE, Sir W. M. CONWAY, Prof. W. M. DAVIS, Prof. ANGELO HEILPRIN, Prof. FRIDTJOF NANSEN, Dr. J. SCOTT KELTIE, and F. C. SELOUS. With 488 Illustrations. Edited by HUGH ROBERT MILL, D. Sc. 8vo. 1088 pages. Cloth, \$3.50.

"Can unhesitatingly be given the first place among publications of its kind in the English language. . . . An inspection of the list of associate authors leads readily to the conclusion that no single volume in recent scientific literature embodies, in original contributions, the labor of so many eminent specialists as this one. . . . The book should find a place in every library, public or private, that contains an atlas or gazetteer."—*The Nation*.

"The attempt to present in one volume an authoritative modern summary of the whole of geography as fully as space would permit has been admirably successful."—*New York Sun*.

"In brief, it may be said to be both a reference book and a connected geographical history of the modern world, something that any one can read with profit in addition to finding it of constant value in his library."—*Chicago Evening Post*.

"In his entirely studious moments the geographer cherishes above all things facts and accuracy. He must, therefore, value very highly a work like the 'International Geography.' It should be precious alike to the specialist and to the beginner. . . . Small but adequate maps are constantly introduced, and there is, finally, a splendid index."—*New York Tribune*.

"Simply invaluable to students, teachers, and others in need of such a book of reference."—*Washington Times*.

"Not only as complete as the limits would allow, but is strictly up to date."—*San Francisco Argonaut*.

D. APPLETON AND COMPANY, NEW YORK.

A NEW VIEW OF DEATH.

The Individual.

A Study of Life and Death. By Prof. N. S. SHALER, of Harvard University. 12mo. Cloth, \$1.50.

Professor Shaler's book is one of deep and permanent interest. In his preface he writes as follows: "In the following chapters I propose to approach the question of death from the point of view of its natural history, noting, in the first place, how the higher organic individuals are related to those of the lower inorganic realm of the universe. Then, taking up the organic series, I shall trace the progressive steps in the perfection of death by a determination as to the length of the individual life and its division into its several stages from the time when the body of the individual is separated from the general body of the ancestral life to that when it returns to the common store of the earth. . . . In effect this book is a plea for an education as regards the place of the individual life in the whole of Nature which shall be consistent with what we know of the universe. It is a plea for an understanding of the relations of the person with the realm which is, in the fullest sense, his own; with his fellow-beings of all degrees which are his kinsmen; with the past and the future of which he is an integral part. It is a protest against the idea, bred of many natural misconceptions, that a human being is something apart from its fellows; that it is born into the world and dies out of it into the loneliness of a supernatural realm. It is this sense of isolation which, more than all else, is the curse of life and the sting of death."

"Typical of what we call the new religious literature which is to mark the twentieth century. It is pre-eminently serious, tender, and in the truest sense Christian."—*Springfield Republican*.

"In these profoundly thoughtful pages the organic history of the individual man is so presented as to give him a vision of himself undreamed of in a less scientific age. . . . Speaking as a naturalist from study of the facts of Nature, Professor Shaler says that these can not be explained 'except on the supposition that a mighty kinsman of man is at work behind it all.'"—*The Outlook*.

D. APPLETON AND COMPANY, NEW YORK.

D. APPLETON AND COMPANY'S PUBLICATIONS.

NEW VOLUMES IN THE INTERNATIONAL EDUCATION SERIES.

BIBLIOGRAPHY OF EDUCATION. By WILL S. MONROE, A. B., Department of Pedagogy and Psychology, State Normal School, Westfield, Mass. \$2.00.

This book will prove of great use to normal schools, training schools for teachers, and to educational lecturers and all special students seeking to acquaint themselves with the literature of any particular department. It will be of especial value to librarians in the way of assisting them to answer two questions: (a) What books has this library on any special educational theme? (b) What books ought it to obtain to complete its collection in that theme?

FROEBEL'S EDUCATIONAL LAWS FOR ALL TEACHERS. By JAMES L. HUGHES, Inspector of Schools, Toronto. \$1.50.

The aim of this book is to give a simple exposition of the most important principles of Froebel's educational philosophy, and to make suggestions regarding the application of these principles to the work of the schoolroom in teaching and training. It will answer the question often propounded, How far beyond the kindergarten can Froebel's principles be successfully applied?

SCHOOL MANAGEMENT AND SCHOOL METHODS. By Dr. J. BALDWIN, Professor of Pedagogy in the University of Texas; Author of "Elementary Psychology and Education" and "Psychology applied to the Art of Teach- ing." \$1.50.

This is eminently an everyday working book for teachers; practical, suggestive, inspiring. It presents clearly the best things achieved, and points the way to better things. School organization, school control, and school methods are studies anew from the standpoint of pupil betterment. The teacher is led to create the ideal school, embodying all that is best in school work, and stimulated to endeavor earnestly to realize the ideal.

PRINCIPLES AND PRACTICE OF TEACH- ING. By JAMES JOHONNOT. Revised by SARAH EVANS JOHONNOT. \$1.50.

This book embodies in a compact form the results of the wide experience and careful reflection of an enthusiastic teacher and school supervisor. Mr. Johonnot as an educational reformer helped thousands of struggling teachers who had brought over the rural school methods into village school-work. He made life worth living to them. His help, through the pages of this book, will aid other thousands in the same struggle to adopt the better methods that are possible in the graded school. The teacher who aspires to better his instruction will read this book with profit.

THE LIBRARY OF USEFUL STORIES.

Illustrated. 16mo. Cloth, 35 cents net per volume;
postage, 4 cents per volume additional.

The Story of Alchemy. By M. M. PATTISON MUIR.

The Story of Animal Life. By B. LINDSAY.

The Story of the Art of Music. By F. J. CROWEST.

The Story of the Art of Building. By P. L. WATERHOUSE.

The Story of King Alfred. By Sir WALTER BESANT.

The Story of Books. By GERTRUDE B. RAWLINGS.

The Story of the Alphabet. By EDWARD CLODD.

The Story of Eclipses. By G. F. CHAMBERS, F. R. A. S.

The Story of the Living Machine. By H. W. CONN.

The Story of the British Race. By JOHN MUNRO, C. E.

The Story of Geographical Discovery. By JOSEPH JACOBS.

The Story of the Cotton Plant. By F. WILKINSON, F. G. S.

The Story of the Mind. By Prof. J. MARK BALDWIN.

The Story of Photography. By ALFRED T. STORY.

The Story of Life in the Seas. By SYDNEY J. HICKSON.

The Story of Germ Life. By Prof. H. W. CONN.

The Story of the Earth's Atmosphere. By DOUGLAS ARCHIBALD.

The Story of Extinct Civilizations of the East. By ROBERT ANDERSON, M. A., F. A. S.

The Story of Electricity. By JOHN MUNRO, C. E.

The Story of a Piece of Coal. By E. A. MARTIN, F. G. S.

The Story of the Solar System. By G. F. CHAMBERS, F. R. A. S.

The Story of the Earth. By H. G. SEELEY, F. R. S.

The Story of the Plants. By GRANT ALLEN.

The Story of "Primitive" Man. By EDWARD CLODD.

The Story of the Stars. By G. F. CHAMBERS, F. R. A. S.

OTHERS IN PREPARATION.

D. APPLETON AND COMPANY, NEW YORK.

TWENTIETH CENTURY TEXT-BOOKS.

The closing years of the nineteenth century witnessed a remarkable awakening of interest in American educational problems. There has been elaborate discussion in every part of our land on the co-ordination of studies, the balancing of contending elements in school programmes, the professional training of teachers, the proper age of pupils at different stages of study, the elimination of pedantic and lifeless methods of teaching, the improvement of text-books, uniformity of college-entrance requirements, and other questions of like character.

In order to meet the new demands of the country along these higher planes of educational work, the Twentieth Century Text-Books have been prepared.

At every step in the planning of the series care has been taken to secure the best educational advice, in order that the books may really meet the increasing demand from academies, high schools, and colleges for text-books that shall be pedagogically suitable for teachers and pupils, sound in modern scholarship, and adequate for college preparation.

The editors and the respective authors have been chosen with reference to their qualifications for the special work assigned to them. These qualifications are: First, that the author should have a thorough knowledge of his subject in its latest developments, especially in the light of recent educational discussions; second, that he should be able to determine the relative importance of the subjects to be treated in a text-book; third, that he should know how to present properly his topics to the ordinary student.

The general editorial supervision of the series is in the hands of Dr. A. F. Nightingale, formerly Superintendent of High Schools, Chicago, with whom is associated an advisory committee composed of an expert in each department of study.

The offer of a complete series of text-books for these higher grades of schools, issued under auspices so favorable, is an event worthy of the twentieth century, and a good omen for the educational welfare of the future.

One hundred volumes are comprised in the series. A list of those now ready, and of others in preparation, will be sent upon request.

D. APPLETON AND COMPANY, NEW YORK.

